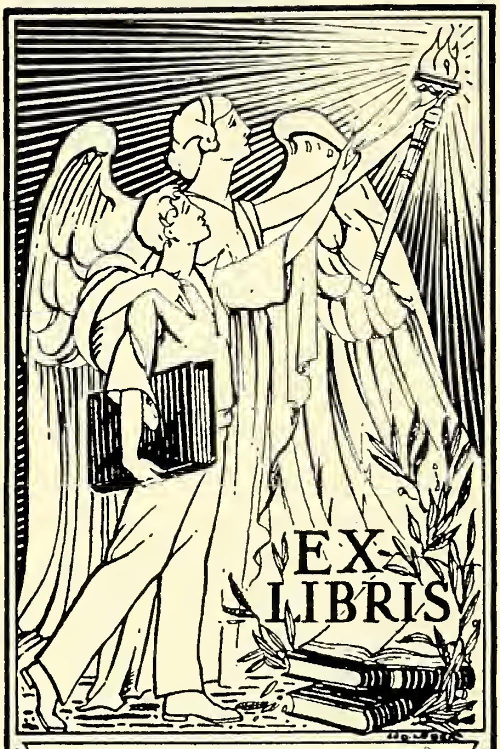
REPORT

ON

THE BRITISH HEALTH SERVICES

PEP (Political and Economic Planning)



M.C. MIGEL LIBRARY
AMERICAN PRINTING
HOUSE FOR THE BLIND

Digitized by the Internet Archive
in 2016

https://archive.org/details/reportonbritishh00unse

REPORT ON THE
BRITISH HEALTH SERVICES

PEP (Political and Economic Planning) is an independent non-party group, consisting of more than a hundred working members who are by vocation industrialists, distributors, officers of central and local government, doctors, university teachers, and so forth, and who give part of their spare time to the use of their special training in fact-finding and in suggesting principles and possible advances over a wide range of social and economic activities. By means of the fortnightly broadsheet *PLANNING*, PEP keeps in continuous touch with a large number of men and women interested in social and economic reconstruction. The group has issued more than a hundred broadsheets on a considerable variety of subjects, and has also published full-scale reports on the coal-mining, cotton and iron and steel industries, housing and building, electricity supply, international trade, the social services, retirement pensions and continued education from the age of fourteen. Details of these are given inside the back cover.

This, like all PEP Reports, aims primarily at breaking down sectionalism and enabling broader views to be taken. Its basis, therefore, is as complete as possible an assembly of the essential facts about the health services and their contemporary problems. We have also tried to ascertain and summarise what seems to be the consensus of informed opinion about the various services, by means both of published reports and of interviews and correspondence with a large number of those most closely concerned. Finally, on a small number of key questions, such as the role of the general practitioner, the extension of national health insurance, hospital policy, nutrition policy and industrial health, we have ourselves attempted, through group discussion and thought, to state a point of view and to make concrete proposals. The Report should be read with this in mind. It does not claim exhaustiveness or finality, and is only intended to provide an elementary basis for constructive thought and discussion of the health problem as a whole among those concerned.

PEP welcomes constructive criticism, inquiries and suggestions, which should be addressed to:

The Secretary,
PEP,
16 Queen Anne's Gate,
London, S.W.1.

Telephone: WHItehall 7245-6.

PEP (POLITICAL AND ECONOMIC PLANNING)

REPORT
ON
THE BRITISH HEALTH SERVICES

A survey of the existing
Health Services in Great Britain with proposals
for future development.

DECEMBER 1937

PUBLISHED BY PEP
16 QUEEN ANNE'S GATE
LONDON, S.W.1

HV1941
P
cop.1

Printed by the Stanhope Press, Ltd., Rochester, Kent

CONTENTS

Page

SUMMARY AND CONCLUSIONS 1

Introduction—What are the Health Services?—Scope and Order of Treatment—General Organisation and Administration—Impersonal Protective Services—Protection of Food Supply—Control of the Trade in Medicines—Infectious Diseases—Industrial Health—Maternity and Child Welfare—The Pre-School Child—The School Medical Service—Organisation of the Medical Profession—Medical Training—The Work and Status of the Medical Practitioner—Medical Practice and the Health Services—Other Professional Health Services—Nursing—Dentistry—Ophthalmic Services—Pharmacy—Other Medical Auxiliaries—The National Health Insurance System—Criticisms of National Health Insurance—The Extension of National Health Insurance—The Hospital System—Voluntary Hospitals—Public Hospitals—National Hospital Problems—Convalescent Homes and Nursing Homes—Special Services—Provision for Mental Patients and Mental Defectives—Tuberculosis Service—Venereal Diseases Service—Cancer—Cripples—Blindness—The Deaf and the Deaf and Dumb—Medical Research—Genetics and Public Health—Nutrition—Physical Education—Psychological Medicine and Mental Health—Health Education—Peckham Pioneer Health Centre—Administrative Experiments—Are We Getting Healthier?—The Cost of Ill-Health—Conclusion.

I ADMINISTRATIVE MACHINERY 28

Introduction—Central Departments—Statutory Bodies—Local Authorities—The Supervision of Voluntary Bodies—International Health Services.

II IMPERSONAL PROTECTIVE SERVICES 33

Environmental Services. Housing: Evidence of Overcrowding and Slum Conditions—Housing and Health—Measures for Abolition of Slums—*Sanitary Arrangements—Street Cleansing and Refuse Removal—Water Supply—Atmospheric Pollution—Prevention of Noise—The Protection of the Food Supply:* Introduction—Legislation for Ensuring the Safety and Purity of the Food Supply—Administration of Laws Relating to Safety of Food Supplies—Milk—Inadequacy of Laws relating to the Purity of the Food Supply and Deficiencies in their Administration—The Composition of Foods—The Law Relating to Advertising—The Inadequacy of the Law—The Recommendations of the Departmental Committee on the Composition and Description of Food—Conclusion—*Control of the Trade in Medicines:* Legislative Control of the Trade in Medicines—Results of the Lack of Protection of the Consumer—The Taxation of Medicines—Recommendations—*The Control of Infectious Diseases:* International Services—Port Health Authorities—Notification and Control of Infectious Diseases—Vaccination—Conclusion.

III INDUSTRIAL HEALTH 65

Introduction—Hours of Work—Environmental Conditions—Accidents—Occupational Diseases—The Examining Surgeon—Central Administration—Local Administration—The Administrative System considered critically—Industrial Medical Officers—The Place of the Industrial Doctor in the Industrial Health Services—Medical Examinations—Education in Industrial Health Problems.

IV HEALTH SERVICES FOR MOTHERS AND CHILDREN . . . 90

Maternity and Child Welfare: Introduction—Maternal and Infant Mortality Rates—Statistical Studies into the causes of Maternal Mortality in England—Scottish Maternal Mortality Rate—*Maternity Services:* Ante-Natal Care—Institu-

Page

tional Provision for Maternity Cases—Midwifery Service—The General Practitioner—National Health Insurance—Home Helps—Post-Natal Care—*Infant Welfare:* Provision for the Unmarried Mother and her Child—Propaganda and Education—*Improvements:* A National Maternity Service for England and Wales—Scottish Maternity Services—Method of Financing a National Maternity Scheme—Co-ordination of Administration—Co-operation in the Maternity and Child Welfare Services—Maternity and Child Welfare Services and Social Conditions—*The Health of the Pre-School Child:* Introduction—The Health of the Pre-School Children—Maternity and Child Welfare Centres—Day Nurseries—Nursery Schools—School Attendance and Nursery Classes—Conclusions—*School Medical Service:* History—Administration and Scope of the School Medical Service—Medical Inspection—Treatment—Staff of the School Medical Service—Special Schools—Medical Services in Junior Instruction Centres—Voluntary Work—Gaps in the School Medical Service—Provision for the Normal Child—Relation of the School Medical to Other Services.

V THE MEDICAL PROFESSION 127

The Organisation of the Medical Profession: History—The General Council of Medical Education and Registration of the United Kingdom and the Medical Act 1858—Licensing Authorities—The British Medical Association—Other Professional Organisations—*Medical Training—Analysis of the Work and the Status of the Medical Practitioner:* Introduction—Numbers of Registered Medical Practitioners—Powers and Duties of Registered Medical Practitioners—*The General Practitioner:* Types of General Practitioner—Medical Partnerships and Assistantships—Remuneration—The General Practitioner's Relation to National Health Insurance—Contract Practice—Dispensaries (Free and Provident)—Doctors' Clubs—Public Medical Services—Insurance Against Doctors' Bills—*Public Service:* Doctors Employed by Local Authorities—Doctors Employed by Government Departments—The Services—*Specialists and Consultants—Medical Practice and the Health Services.*

VI OTHER PROFESSIONAL HEALTH SERVICES 166

General Nursing: The Development of the Nursing Services—The Organisation of the Nursing Services—Professional Organisations—The Staffing of Hospitals—The Pay and Pensions of Hospital Nurses—Nursing in the Public Health Services—State Services—Nursing Homes—Private Nursing—Industrial Nursing—Problems of the Recruitment and Training of Nurses—Conclusion—*District Nursing:* Description of Work and Position in the Health Services—Local Organisation—Finance—Central Organisation—Relations with Local Authorities—District Nursing and Midwifery Services—Special Areas and Highlands and Islands—Adequacy—Conclusion—*Dental Services:* Historical Survey of Dentistry—Organisation of the Dental Profession—The Problem of Dental Health—The Dental Services of Great Britain—*Ophthalmic Services:* The Organisation of the Ophthalmic Services—The Provision of Ophthalmic Services—Conclusion—*The Pharmacy Services:* Organisation of the Pharmaceutical Profession—Provision for Pharmaceutical Services—*Other Medical Auxiliaries.*

VII NATIONAL HEALTH INSURANCE 194

The National Health Insurance System: Introduction—Persons covered by National Health Insurance — Excepted Persons — Exemption — Voluntary Insurance — Determination of Doubtful Questions of Insurability—Insurance Rights—Statistics of National Health Insurance—Finance of National Health Insurance—Administration—Medical Benefit—Approved Societies—Deposit Contributors and Others—Cash Benefits—Maternity Benefit—Additional Treatment Benefits—*A Criticism of the National Health Insurance System:* Administration—Approved Societies—Cash Benefits—Maternity Benefits—Additional Treatment Benefits—

Page

Treatment of Claims—The Extent of National Health Insurance—*The Extension of National Health Insurance:* The Case Against National Health Insurance—Schemes for a Public Medical Service—Scope of an Extended Health Insurance Scheme—Measures for Extending and Improving Medical Benefit—Cost of Providing Consultant and Specialist Services—Extension of Additional Treatment Benefits—Cost of Improved Maternity Benefit—Administrative Problems—Capacity to Pay—Justification for the State Contributions—Conclusion.

VIII INSTITUTIONAL TREATMENT 230

The Hospital System of Great Britain: The Voluntary Hospitals: Government—Finance—Hospital Contributory Schemes—Patients—Paying Patients—Staff—The Problem of the Special Hospitals—The Problem of the Size of General Hospitals, particularly in relation to Teaching—Co-ordination of the Voluntary Hospitals—Peculiarities of the Voluntary System—its justification?—*Public Hospitals:* Authorities—Government—Finance—Medical Staff—Patients—The Problem of Special Hospitals—Administrative Problems of Public Hospitals—*National Hospital Problems:* The Adequacy of Hospital Accommodation—Co-operation between Voluntary Hospitals and Public Hospitals—The Geographical Distribution of Voluntary and Public Hospitals—Conclusions—*Ambulance Services*—*Convalescent Homes and Nursing Homes: Convalescent Homes*—Types of Convalescent Care—Financial Aspects of Convalescent Care—Conclusions—*Nursing Homes.*

IX SPECIAL SERVICES 271

Provision for Persons Suffering from Mental Disorder and Mental Deficiency: Introduction—*Mental Disorders:* Certification and Treatment—Local Authorities—The State and Voluntary Bodies—Conclusion—Statistics—*Mental Deficiency:* Incidence of Mental Defect—The Wood Committee's Recommendations—*The Tuberculosis Service:* Introduction—Incidence and Mortality—Effects of Urbanisation—Tuberculosis Service—Improvements—*Venereal Diseases Services:* The Service—Incidence and Use of Centres—After Effects—Problems and Remedies—*Cancer and the Radium Services:* Mortality—Methods of Treatment—The National Radium Trust and the Radium Commission—The Work of the Centres—Facilities for the Prevention, Diagnosis and Treatment of Cancer—*Provision for the Care of Cripples:* Causes of Crippling—Incidence of Crippling—Local Authorities and Cripples—Voluntary Work—Administrative Arrangements—Conclusion—*The Welfare of the Blind:* Incidence and Causes of Blindness—The State and Local Government Service—Education—Cost—Voluntary Work—*The Deaf and the Deaf and Dumb:* Incidence of Deafness—Statutory Provision—Voluntary Provision—Improvements.

X RESEARCH AND GENETICS 309

Medical Research: The Medical Research Council—Other Government-controlled Research—Unofficial Bodies—Problems of Medical Research Policy—*Genetics and Public Health:* Introduction—Inherited Defects—Sterilisation—Need for Research.

XI NUTRITION 319

Introduction—The Meaning of Malnutrition—Evidence of Malnutrition—Causes of Malnutrition—Nutrition and National Policies—Provision for Improving the Nutrition of the Population—Milk—Potatoes—Control and Management of Prices of Foodstuffs—Propaganda and Instruction—Research—Proposals.

XII PHYSICAL EDUCATION 338

Introduction—Physical Education and Health—Physical Education in Schools and Universities—Provision for Physical Education for those no longer at School—Provision in Industry and for the Unemployed—The Government's Scheme—Training of Teachers—Medical Supervision and Physical Education—A Skeleton Scheme of Physical Education—Conclusion.

Page

XIII OTHER EXPERIMENTAL SERVICES 351

Psychological Medicine and Mental Health: Introduction—Evidence of Prevalence of Mental Ill-health (psycho-neurosis)—Provision for the Cure of Mental Ill-health—Teaching — Research — Conclusion — *Health Education:* Introduction — The Mothers—The Schools—General Health Education—Conclusion—*The Pioneer Health Centre, Peckham:* Purpose—Medical Surveys—Some Activities—Conclusion.

XIV ADMINISTRATIVE EXPERIMENTS 363

The Highlands and Islands Service: History—Medical Service—Nursing Service—Hospitals and Specialists' Services—Conclusion—Finance—*Gloucestershire Medical Services Scheme.*

XV THE EXTENT AND COST OF ILL-HEALTH 369

Are We Getting Healthier? Longevity—Mortality at Successive Ages—Infants—Children—Adults—Mortality in Different Parts of England and Wales—*Incidence of Sickness:* Notifiable Diseases—Health Insurance Records—School Children—*The Cost of Ill-health:* Preventive Services—Conclusion.

XVI THE HEALTH PROBLEM REVIEWED 394

Reorientation of the Health Services: What is Health?—Indirect Health Services—The Role of the General Practitioner—Problems of Reorientation—*Voluntary and Public Service:* What do we Mean by "Voluntary"?—Defects and Merits of the Voluntary Bodies—Scope of Voluntary Bodies—The Development of Voluntary Services into Public Services—*Co-ordination of Public Services:* The Problem of Areas and of Creating Omnibus Authorities—Regionalism—Internal Organisation of the Administrative System of Local Government—*Personnel Problems—Development:* Tasks of the Health Services—Priorities—*Economics of Health:* Finance of the Health Services—Commercialism and the Consumer—Conclusion.

APPENDIX I 416

(A) Table of Central and Local Authorities for Principal Health and Environmental Services in Great Britain.

(B) Allocation of Powers Connected with the Health Services in the County of London.

APPENDIX II

(1) General Hospitals in the County of London.
(2) Special Hospitals in the County of London.
(3) Hospitals in the County of Norfolk.

LIST OF FIGURES

Fig. 1 Index Numbers for Employment and for Accidents per 1,000 employed . . 72
„ 2 Maternal Mortality Rate in England and Wales 92
„ 3-5 Tuberculosis, England and Wales 283
„ 6 Venereal Diseases, England and Wales 290
„ 7 Death Rates by Age, England and Wales, 1901-1910 and 1930-1932 371
„ 8 Death Rate at Different Ages in the First Year of Life, England and Wales . 373
„ 9 Death Rate during First Year of Life, England and Wales, 1906-10, 1921-25 & 1935.
„ 10 Death Rate by Causes during the First Year of Life, England and Wales, 1935 . 373
„ 11 Deaths of Infants aged under one month, England and Wales, 1913 and 1935 . 374
„ 12 Deaths of Infants, aged 1 to 12 months, England and Wales, 1913 and 1935 . 374
„ 13 Deaths of Children, aged 1 to 5 years, England and Wales, 1913 and 1935 . . 376
„ 14 Deaths According to Cause at Ages 15-60, England and Wales, 1935 . . . 379
„ 15 Mortality at Ages 15-60 from the Principal Causes, England and Wales, 1913 and 1935 380
„ 16 Chronic Invalids amongst London School Children 386
„ 17 Infectious Diseases amongst London School Children 386

SUMMARY AND CONCLUSIONS

Introduction—What are the Health Services?—Scope and Order of Treatment—General Organisation and Administration—Impersonal Protective Services—Protection of Food Supply—Control of the Trade in Medicines—Infectious Diseases—Industrial Health—Maternity and Child Welfare—The Pre-School Child—The School Medical Service—Organisation of the Medical Profession—Medical Training—The Work and Status of the Medical Practitioner—Medical Practice and the Health Services—Other Professional Health Services—Nursing—Dentistry—Ophthalmic Services—Pharmacy—Other Medical Auxiliaries—The National Health Insurance System—Criticisms of National Health Insurance—The Extension of National Health Insurance—The Hospital System—Voluntary Hospitals—Public Hospitals—National Hospital Problems—Convalescent Homes and Nursing Homes—Special Services—Provision for Mental Patients and Mental Defectives—Tuberculosis Service—Venereal Diseases Service—Cancer—Cripples—Blindness—The Deaf and the Deaf and Dumb—Medical Research—Genetics and Public Health—Nutrition—Physical Education—Psychological Medicine and Mental Health—Health Education—Peckham Pioneer Health Centre—Administrative Experiments—Are We Getting Healthier?—The Cost of Ill-Health—Conclusion.

Introduction

This survey of the British Health Services has proved one of the most complex and difficult tasks yet undertaken by P E P. The subject is certainly not fundamentally more baffling than such problems as international trade or the development of the social services, but it suffers from a bewildering number of fragmentary and often conflicting specialisms, medical, administrative and financial. It also suffers from pronounced differences of attitude and approach between, for example, the supporters of voluntary and of government initiative, and between those who stress prevention as against those who are preoccupied with cure. For the past three years the Health Group has been engaged first in evolving an agreed line of approach and subsequently in collecting the mass of material necessary as a basis for even a tentative and sketchy factual outline of the vast range of British health services. Three other groups, one dealing with social services, one with nutrition and one with industrial health, have made important contributions, and several more have been drawn upon for such borderline subjects as consumer questions, regional administration and milk policy. As an indication of the amount of correspondence and labour involved, and of the co-operation which the group has been fortunate enough to secure in its task, it may be mentioned that more than 200 different persons and organisations have supplied material or revised drafts for various sections of the Report. P E P work is traditionally anonymous, and we must resist the temptation to list the many distinguished authorities and prominent health organisations whose contributions have helped to build up the Report. If in places the text has failed to do justice to the available knowledge and experience the shortcoming is due to the inherent difficulties of reviewing so immense a range of problems, services and techniques in so limited a space and with so limited a staff.

We are only too conscious that the task could have been better done and we hope that some day it will be.* If this preliminary attempt serves to show the type of authoritative review of the health services which is needed, and to stimulate thought about their common problems, it will have amply served its purpose. The mere fact that no comprehensive approach to the health services was available and that it has taken a group of ordinarily intelligent people three years to hammer out this preliminary synthesis, is conclusive proof that the subject was in a serious state of confusion. The fact that the elementary information here given had to be collected by prolonged inquiry from so many different persons and agencies is itself a criticism for those who believe, as we do, that it is important to try to look at these services as a whole, and to judge how they are doing their job by examining them in relation to one another and to the needs they exist to satisfy. No one can be surprised if sectional and one-sided views are prevalent so long as the basis for a balanced and comprehensive view does not exist.

What are the Health Services?

One of the first difficulties which arose was to find a satisfactory answer to the question: what are the health services? To take a narrow definition would have been to perpetuate the common mistake of using health services as a synonym for sickness services. On the other hand, the subject would be expanded to an unmanageable extent if we were to follow to its logical end the view that health services cover all human activities which promote or might be used to promote health, including for example labour management, the design and pricing of food and clothing, housing and its location in relation to work and play, and the methods of using leisure. We have tried to strike a balance between these two views, on the one hand examining the importance of improving the services which deal with actual cases of ill-health, and on the other emphasising the need for a progressive widening of the idea of health services to bring in and co-ordinate many activities at present carried on without relation to, or actually in opposition to, the needs of national health. So far as possible we have analysed what is wrong within the generally recognised health services, and also at what points the concept of health services needs to be widened so as to ensure the utmost national concentration upon fitness consistent with other national and individual needs.

Scope and Order of Treatment

The order of treatment we have adopted begins with a brief summary of the general administrative mechanism of the British health services. Then follows a review of services of an impersonal protective nature—housing in its health aspects, sanitation, water supply, atmospheric pollution, the prevention of noise, the protection of the purity and safety of human food, the control of the trade in medicines, and the measures for controlling outbreaks of infectious diseases.

Next we deal with the protection of the health of the worker in factories, offices, shops, mines and transport undertakings—a service which is also largely impersonal.

The Report now begins to consider the health provision for individuals, starting with mothers and children, and reviewing the maternity and child welfare services, the problem of the pre-school child and the school medical service. This section leads to the central part of the Report, in which we survey the organisation of the medical profession, the methods and problems of medical training, the work, working conditions and pay of the general practitioner, and also of consultants and of doctors in the service of local authorities, concluding with a view of the most appropriate future role of the general practitioner in relation to other members of the profession. There follow in order accounts of the organisation and problems of the nursing profession, including district nursing, and of the dentistry, ophthalmic, pharmacy and other professional health services.

---

* The Committee on the Scottish Health Services in their Report (1936, Cmd. 5204) have comprehensively reviewed and criticised the provisions in Scotland and have provided a most valuable model.

We are now in a suitable position to examine National Health Insurance, to which so many of the health services are intimately bound, and after considering its defects and anomalies to suggest lines of development, particularly in the direction of making available to insured persons and their dependants more complete medical attention at all ages, and in most contingencies.

An account is next given of the voluntary and public hospitals and their separate and common problems, followed by a review of the special services providing for sufferers from mental ill-health, from tuberculosis, from venereal diseases, from cancer, from crippling, from blindness and from deafness and dumbness.

The next group of services dealt with are of a newer and more experimental nature, —they include the provision for medical research, for the improvement of nutrition, for physical education, for psychological medicine, for health education, and such experiments as the Pioneer Health Centre, Peckham, the Gloucestershire Medical Services Scheme, and the Highlands and Islands Medical Service.

We conclude with two more general chapters, the first reviewing statistically the material for an answer to the questions "Are we getting healthier?" and "What does ill-health cost?" and the second analysing some of the general and underlying problems of the health services which the discussion in the Report has raised.

General Organisation and Administration

The British health services as defined above are administered in many different ways by many different bodies. The State itself operates certain services, and exercises varying degrees of supervision over almost all, either directly or through the local authorities. With a few exceptions such as medical research, which comes under the Privy Council, and factory inspection, which comes under the Home Office, the health services fall within the province of Ministers who are precluded from dealing with the whole of Great Britain—the Minister of Health and the President of the Board of Education for England and Wales, and the Secretary of State for Scotland. Generally speaking the functions of these three Ministers are to help and encourage local authorities to provide health services, and to see that adequate services are provided, rather than to undertake any direct provision themselves. Broadly speaking, the actual running of health services authorised by statute, except National Health Insurance, is in the hands of the local authorities. The professions concerned with health services are largely supervised by statutory bodies.

Impersonal Protective Services

The first series of health services described and analysed are those often termed environmental services—housing, water supply, sewerage, the prevention of air and water pollution and of noise, and so forth. Many other activities, such as town and country planning, and transport, have far-reaching effects upon health and may in future come to be regarded as important environmental health services. It was impracticable, however, to widen the scope of this Report sufficiently for their inclusion. Starting with housing, it is shown that overcrowding is of two distinct types, the first involving an excess of population in relation to area and the second an excess in relation to number and size of rooms. Both these types are prevalent. In England and Wales some 342,000 dwellings were recently found to be overcrowded by the official standard, and a further 511,000 were very near the borderline. Overcrowding ranged from 25 per cent in Hebburn to 0.3 per cent in Bournemouth. In Scotland conditions were much worse, nearly a quarter of all working-class families being overcrowded, and not far short of half in such towns as Clydebank and Port Glasgow. Towns with high overcrowding ratios had in several cases double or even triple the infant mortality rate of towns with low overcrowding ratios. Tuberculosis and other diseases are shown to be seriously aggravated by bad housing conditions. Large State-assisted building programmes are rapidly eliminating the worst slums, but abatement of the overcrowding brought to light by the survey mostly remains to be tackled, and meanwhile serious fresh problems have been created, such as the growing distances of daily travel between homes, work-places and places of recreation. Sanitary arrangements have in most areas reached a level of adequacy where there has ceased to be any serious danger to health, but the cost of sewerage, refuse collection and street cleaning is often inflated and efficiency reduced by the carving up of suitable areas into fragments, each under the jurisdiction of a separate and not always co-operatively-minded local authority. With water supply the position is rather more serious, as there are not only 1,011 bodies in England and Wales supplying water under special or general Acts, but also an additional 1,080 companies and persons without statutory powers. Some first steps towards planning the use of national water resources have, however, lately been taken.

Pollution of rivers is very inadequately checked, and atmospheric pollution by smoke and other nuisances has no more than begun to be recognised as a national reproach to be removed by governmental action. Changes in fuel use have however enabled more sunlight to get through—the loss of sunshine in central London as compared with Kew has only been 50 per cent recently against 80 per cent fifty years back. On the other hand, noise is a source of injury to health which has immensely increased and is only beginning to be taken seriously.

Protection of Food Supply

The protection of food supply has long been recognised as a function of government, and control over purity and safety has steadily been tightening during the past sixty years. Even in this respect, however, the present position is unsatisfactory. Although detected cases of food poisoning are infrequent this danger has by no means been eliminated, and milk-borne epidemics are still quite common, no less than 50 persons having lost their lives in this way as lately as 1936 in the Bournemouth-Christchurch-Poole enteric fever outbreak. Owing to the mainly urban and local basis of food inspection large sums have to be spent by consuming centres in detecting dangers in food brought from the country, which could more readily and economically have been detected at or near the source of supply. For example, animals are often slaughtered uninspected in rural areas, and the urban Medical Officer of Health has the difficult and unsatisfactory task of dealing with the meat after it has been cut up and dressed.

Apart from impurities and infection involving immediate danger to health there is a need, which is often ignored, for supervising the quality of food and drink, and for ensuring that the consumer gets what he is paying for. Few nations leave these points so much to chance as the British, and it is extremely difficult to secure convictions except in occasional cases of gross and clumsy misrepresentation. The Ministry of Health's Departmental Committee on the Composition and Description of Food reported in 1934 in favour of altering the law to enable definitions or standards to be prescribed or declarations of composition to be required for articles of food, but its recommendations have so far been successfully shelved. The point must now be recognised as of greater importance owing to the recent nutrition discoveries discussed in Chapter XI, which show that apparently identical foods may differ vastly in their food value to the consumer, while there is a growing tendency for manufacturers to interfere drastically, and not always in the public interest, with the composition of well-known products.

Control of the Trade in Medicines

A Select Committee reported in August 1914 that there was in Great Britain a large and increasing sale of patent and proprietary medicines and medicinal wines, and that these were partly genuine scientific remedies, partly unobjectionable remedies for simple ailments and partly secret remedies making grossly exaggerated claims, tempting purchasers to delay necessary treatment, containing in disguise large quantities of alcohol, sold for improper purposes, professing to cure diseases incurable by medication, or essentially and deliberately fraudulent. Owing to the War nothing was done and an indictment can still be framed at the present time. In certain respects, notably in regard to poisons, there is a considerable degree of control, but the great mass of drugs, medicines and health foods, although covered to some extent by the food and drugs legislation, are in practice virtually unsupervised. The growth of large-scale Press and radio advertising has in fact led the general public and even the medical profession to favour and use proprietary health preparations to an extent far in excess of their real value and importance. Over-prescribing, reliance on palliatives and neglect of fundamental health needs are a natural result. It cannot be a satisfactory accompaniment of a national fitness policy that several million pounds a year should be spent in persuading the public by every possible technique that health can be got out of a brightly labelled bottle or tin.

Infectious Diseases

Infectious diseases, owing to the need for rapid and effective action to check their spread, have necessitated more far-reaching public provision than other forms of ill-health. The International Health Office in Paris and the Health Organisation of the

League of Nations co-ordinate and advise upon many measures of international co-operation in this field. Port Health or Sanitary Authorities detect and prevent the entry or control the spread of infectious diseases from abroad, while local authorities secure notification of outbreaks of infectious diseases in their areas and are responsible for disinfection and for checking the spread. Vaccination has been compulsory for sixty years, but owing to loopholes hardly more than one-third of English children are now being vaccinated.

Industrial Health

Very large economic losses fall upon British industry as a result of sickness and accidents. In 1935 compensation was paid for over 400,000 persons injured or killed by accidents in industries covering under half the occupied population of Great Britain. Expenditure by industry under Workmen's Compensation Acts was estimated at just under £12 millions in 1935, and the total number of working weeks lost annually by employees in the National Health Insurance scheme in England and Wales alone is put at about £30 millions. These figures again do not generally record absences of three days or less. Previous P E P reports upon the British Social Services, the Entrance to Industry and the Exit from Industry have dealt with certain aspects of social security and industrial welfare, and other P E P investigations on this problem are in progress. An account is, however, given here of the more strictly health side of industrial conditions. The provisions of the new Factories Act and of the Shops and other Acts are summarised so far as they bear upon working hours and conditions. It is shown that the working environment has a great influence upon health.

The accident rate is higher among young than older workers and among males than females. It varies with trade activity, being highest in a business boom and lowest in a slump. Safety measures are still far from adequate and accident rates have not been conspicuously reduced. The victims are doubly unfortunate, financially in depending for compensation upon a wasteful and often inequitable system of insurance, which dissipates a large part of the money available, and medically in the current methods of treatment, which have lately been shown to result in 37 per cent of permanent incapacity for fracture patients treated in the ordinary way, whereas properly organised clinics get down the ratio to 1 per cent. Many occupational diseases are compulsorily notifiable, and their incidence appears in most cases to be declining. New entrants to industry are medically examined, although the system has hitherto been of little value, and there is no examination at all for boys going into the mines.

Industrial health matters are largely divorced from general health administration, the inspection of factories being carried out centrally by the Factory Department of the Home Office, while mines and shipping regulation come under the Board of Trade and land vehicles under the Ministry of Transport. Local authorities, which have already been administering the Public Health, Shops and other Acts touching industrial health, will take over additional functions under the Factories Act 1937. These arrangements are largely due to the historical accident that factory inspection began largely as a police function and has only gradually developed a constructive aspect, promoting the health and safety of workers. The arguments for transferring these duties to the Ministry of

Health are discussed. At present there are only 264 inspectors and eight medical inspectors for 278,157 factories and workshops, but the staff is understood to be likely to increase.

A number of firms employ industrial medical officers, but it is believed to be uneconomic to have a full-time doctor for staffs of less than 5,000 unless there is a special occupational hazard, and there are understood at present only to be about fifty serving whole-time in Great Britain.

A sub-committee of the British Medical Association have recently drawn up a code of duties and ethical rules for Industrial Medical Officers, summarised in Chapter III. Many new problems are raised by this development, notably the relation of the industrial doctor to the local general practitioners, the need for maintaining the full independence of the industrial doctor and the confidence of the workers in him, despite his being a salaried officer of an undertaking, and the difficulty of organising an industrial medical service for the many firms too small to be able to make their own arrangements. Certain experiments are suggested with a view to a solution.

Medical examinations raise the point whether they are to be used mainly as a method of protecting the employer, or more broadly and humanely as a method of allocating workers to the tasks for which they are best fitted and for helping them over necessary adaptation. There is a disturbing ignorance about health aspects of industry, and education of both managers and workers is shown to be necessary. Such education would eliminate much psychological friction and industrial unrest and would lead to a new standard of labour management.

Maternity and Child Welfare

While death rates from most causes have declined since the War, maternal mortality has slightly increased, and there is now one maternal death to about 260 live births. Mortality within a week of birth has also remained high. It has been officially estimated that about half the current maternal deaths are preventable, the excessive rate being attributed to absence or inadequacy of ante-natal services, errors of judgment on the part of doctor or midwives, lack of effective medical treatment and failure of the mother to seek or to follow advice. Overcrowding and unemployment do not appear to influence the rate adversely, but abortion is an important factor. Unlike most death rates, maternal mortality is highest in the highest income groups. It is higher in the North than in the South of England, and higher still in Scotland.

Ante-natal supervision is given by private doctors and by ante-natal clinics, which are attended by three-quarters of expectant mothers in London, but only one-sixth in the other English administrative counties and only one-third in Scotland. The dietary of many pregnant women is still quite unsatisfactory by modern standards, and arrangements for extra nutrition are often very inadequate.

Midwifery is in a state of transition under recent Acts which aim at providing a whole-time salaried service of midwives. The health insurance provision for maternity is very anomalous and arrangements for medical care require improvement. Some 3,400 infant welfare centres in England and Wales, mainly maintained by local authorities, are visited by some two-thirds of the children born. Nearly all children are also visited at home by a health visitor at least once in the first year. The centres and visitors do not undertake treatment and the failure of National Health Insurance to provide medical benefit for dependants raises serious difficulties here.

Under a 1937 Act Scotland is combining the services of the midwife, general practitioner, and specialist in a national maternity service far more comprehensive than anything yet existing or in preparation in England and Wales. Both a Departmental Committee and the British Medical Association have made proposals on similar lines and it seems very desirable that the whole of Great Britain should enjoy a service up to the new Scottish standard.

The Pre-school Child

Local authorities have power to provide nursery schools for children from the age of two. There are, however, less than 7,000 children in such schools in England and Wales and less than 1,000 in Scotland. A substantially larger number attend nursery classes, but these are not so good as nursery schools. The present policy is only to extend nursery schools where children need continuous medical care and feeding, owing to the high cost involved. The gap in suitable provision between the ages of 2 and 5 undoubtedly leads to much ill-health and maladjustment at later ages. As a minimum, adequate and continuous medical attention should be ensured to all children in these age groups, and our proposals for the extension to dependants of medical benefit under National Health Insurance are designed to secure this.

The School Medical Service

The School Medical Service is only thirty years old. In England and Wales the Minister of Health is responsible, but delegates the task to the Board of Education, who supervise its provision by local education authorities. Medical inspection occurs at least three times during a child's school career and there is some provision for treatment where necessary. There are serious gaps. Less than three-quarters of school children in England and Wales are dentally inspected each year. Even the limited inspection carried out has revealed a mass of neglected complaints, needing treatment. Unfortunately there are great local variations in the adequacy of the service, which should become better integrated with the general educational system as a result of the physical education campaign.

Organisation of the Medical Profession

The medical profession has a long and somewhat complex history, which is briefly summarised in order to explain the lines followed in its development. The statutory governing body of the profession since 1858 has been the General Medical Council, comprised of representatives of the profession, the universities and the Crown, which adds names to or deletes them from the medical register and provides for publication of the British Pharmacopœia. By its control over medical schools the General Medical Council ultimately decides the standard of medical training.

The General Medical Council, however, is not a professional organisation, and the interests of the profession are represented by several bodies, outstanding among which is the British Medical Association with 37,000 members. The B.M.A. is concerned not only with securing adequate rates of pay and conditions of service for doctors, but also with medical etiquette and with general questions of health policy.

Medical Training

It costs about £1,500 and takes at least five years' training to acquire a British medical qualification, without allowing for the lengthy general education required as a condition of entry. There are about 36 medical schools in the British Isles, always associated with a hospital and usually with the local university, which is generally the licensing authority. There were lately about 11,000 male and 1,750 female medical students in Great Britain. The question of medical education has recently been under review and changes are being introduced. The course has been criticised as being overloaded and not affording the student opportunities of thinking for himself. An important part of the teaching must still be done by overworked honorary consultants and surgeons, and the student in the hospitals is liable to see an untypical selection of cases and to learn to deal with them by equipment which will not later be available to him as a general practitioner. Increasing specialisation of medicine imposes an extra burden of post-graduate education, and raises a serious problem of keeping the average general practitioner up to date. This need is being partly met by an official scheme of grant-aided refresher courses for panel practitioners. There has been a considerable development of post-graduate facilities through the recent opening of the British Post-Graduate School at Hammersmith.

The Work and Status of the Medical Practitioner

Most medical students who qualify take up private general practice. They are scattered in towns and large villages all over the country and have to deal on the spot with every kind of sickness and accident, referring to specialist consultants, hospitals and other branches of the health services the minority of cases with which their skill and resources do not permit them to deal. Private practices are normally acquired by purchase, often with borrowed money, for the equivalent of 1½ years' income, and their basis is the goodwill of those who choose a given doctor, or partnership of doctors, to look after the health of their family. With private patients the relation is informal, although governed on the doctor's side by professional etiquette, which forbids for example advertising or other unethical practices. Just on 19 million patients in Great Britain are, however, covered by the National Health Insurance scheme, and most general practitioners rely to a considerable extent upon "panel practice", undertaking to meet the needs of insured patients at an annual capitation fee of 9s. a year for each.

There are probably between 20,000 and 30,000 general practitioners in Great Britain, and 19,000 of these were panel doctors in 1936, with an average in England and Wales of about 900 patients each, giving an average gross income from panel practice of just under £400 a year. The conditions and rewards of general practice vary greatly between the fashionable practitioner in a wealthy district and the practitioner in a poor wage-earning quarter, possibly with heavy unemployment. Medical remuneration in Great Britain appears, however, to be generally high in relation to that of doctors in other countries and of other professions in this country, with the exception of the law. Evidence of incomes is obtainable indirectly from the level of salaries which has to be fixed in order to attract doctors to central and local government service, and directly from such samples as that quoted in the text which indicates a typical net income of about £1,000 a year or more for large numbers of doctors engaged in general practice and panel work.

We describe the conditions under which panel patients are dealt with, and some of the problems arising, such as the tendency to prescribe excessive quantities of medicine. An account is given of unofficial types of contract practice in connection with Friendly Societies, Medical Aid Societies, and dispensaries. Doctors' clubs and "public medical services" are also described. These attempt to fill some of the many gaps in health risks which the national scheme does not cover, notably for dependants. They are confined to the wage-earning classes and involve for large numbers of families voluntary subscriptions of 2d. to 1s. per week. Similar schemes exist for the middle classes, but at present their scale is almost negligible.

Doctors are employed on a large scale by local authorities as public assistance district medical officers (usually part-time) and above all as Medical Officers of Health, with their assistant medical staffs. There are, including assistants, 652 full-time and 760 part-time M.O.H.s in Great Britain. Few doctors in local government service earn less than £600 a year for whole-time work, unless they are training. The central government also employs considerable numbers of medical advisers and inspectors, the Ministry of Health having well over a hundred and the R.A.F. over 250 and the Army over 750. Nearly all general practitioners are to some extent working for and paid by the Government directly or indirectly, for example as panel practitioners, or as certifying factory surgeons appointed by the Home Office. Recent developments have reduced the distinction between the private practitioner and the public medical officer, and have greatly increased the number who double both parts.

Although the medical specialist is so often referred to there is no very clear definition of what a "specialist" is. Certain rough and ready tests have been proposed, but from a medical standpoint the important distinction is between the general practitioner in charge of a case and the consultant, usually but not always a "specialist" in the popular sense, called in to advise him in particular circumstances. A strict ethical code has been drawn up by the B.M.A. in an effort to regulate the relations between the two, which have been rendered more difficult by a number of modern tendencies.

Medical Practice and the Health Services

The crux of the problem of the medical profession is to agree upon the appropriate role of the general practitioner in relation to the specialist and the public health services. Our view is that diagnosis is itself the first and most important of specialisms and that the general practitioner, with his essential knowledge of the patient's background, should be recognised as the specialist in diagnosis. Excessive resort to specialist services is bad both for these services and for the public, lowering standards, increasing congestion and often wasting time and money. The basic task is not to provide for disease in the abstract but to provide for human beings suffering from or liable to disease. This is the task of the general practitioner, who cannot be satisfactorily replaced in it by anyone else. It should be his function to see that the best use is made of the specialist services by the patients under his care.

For many reasons, however, the general practitioner is rarely able in existing circumstances to fill this role adequately, and still less to act as a family health adviser. Some of these reasons are connected with social and economic conditions, others with the limitations of medical training, medical knowledge and medical etiquette, while others are due to accidental factors which have lately tended to undermine the general practitioner in some of his most essential functions.

There is no necessity for a clash between public and private medical services or between the specialist and the general practitioner, who are essential to one another. The fact must, however, be faced that the private practitioner is losing ground and measures to reverse this trend are called for, partly by the health services as a whole acting in their ultimate common interests, and partly by special efforts of the general practitioner to reassert his position through adopting methods more closely in touch with modern needs. In particular we suggest that the possibilities should be thoroughly examined of local groups of doctors operating from a well-equipped centre, such as have often been proposed. The extension of National Health Insurance to cover dependants, proposed in Chapter VII, would both stimulate and necessitate some such readjustment, in order to meet the increased work. At the same time the extension of National Health Insurance to cover consultant services would substantially help to establish in the case of panel practitioners the type of constructive collaboration with consultants that we have in mind.

Other Professional Health Services

In addition to the medical profession an increasing number of satellite professions have recently taken shape in connection with the health services and these are briefly described.

Nursing

Since 1919 an attempt has been made to regularise the nursing profession by a system of State registration, which although not compulsory is almost an essential qualification for the better institutional or public health appointments. The registers are kept by the General Nursing Councils, including representatives of nurses and of the interested government departments. For admission to the general register three or four years of approved training are required, in either voluntary or public hospitals. There is a shortage of trained nurses owing partly to increasing demands, partly to the gap between the usual school-leaving age and the age of admission to training, partly to unsatisfactory training arrangements, and partly to the long hours, hard labour, low pay, poor working conditions and excessive interference with individual liberty which the present organisation often entails. There have also been difficulties over superannuation, but these are being to some extent overcome. Apart from hospital work nurses are increasingly employed in the public health services, in the defence and prison services, and in nursing homes and in private nursing.

A special branch is district nursing, performed by some 8,000 nurses in Great Britain, who work under some thousands of local voluntary associations, mostly affiliated directly or indirectly to the Queen's Institute of District Nursing. These nurses serve the general practitioner and the local authorities by midwifery and health visiting, follow-up and after-care work, dealing with emergencies, care of the bedridden and the chronic sick, school nursing and giving elementary health education. Their work is especially important in rural areas where other health services are weakest. They are financed by much the same methods as the voluntary hospitals, the total income of associations in England and Wales being just over £1 million, of which some 40 per cent comes from patients and contributions.

Although the district associations are doing much good work their present money-raising methods are wasteful and they might with advantage be more closely linked with other health services.

Dentistry

Dentistry has emerged as a profession only very gradually, and not until 1921 was its practice legally restricted to duly registered medical or dental practitioners. Even now less than 60 per cent of the dentists on the register are academically qualified, although the proportion of unqualified men is steadily falling. The wealthier classes visit a dentist regularly and have acquired the habit of looking to him to protect their teeth from decay rather than to pull teeth out when decay has done its work. Elsewhere the standards and frequency of dental attention are still extremely inadequate, and poor dietary, by predisposing many people to dental caries, intensifies the evil. The inadequacy of the school dental service is particularly unfortunate because so many children enter the schools in need of immediate dental treatment and the failure to treat and supervise them is laying up serious trouble for the future, not only over their teeth but over their health in general. There is no doubt that a large part of the public have still to realise the importance of proper attention to their teeth, and a large number of local authorities have not yet awakened to the need for giving the children a good start in this respect in the schools. The absurdly complicated and wasteful administration of dental benefit under the health insurance scheme is another obstacle which has to be removed before the nation can be induced to look after its teeth properly.

Ophthalmic Services

The provision for looking after the nation's teeth is, however, almost satisfactory compared with the provision for looking after its eyes. Ordinary general practitioners do not feel competent to treat ocular defects unless they have had a special training. This is not possessed by nearly enough medical men and women to meet the national requirements, and very large numbers of people have glasses, to correct their sight defects, not only made but prescribed for them by opticians, whose Joint Council has prepared a list of some 3,500 "registered optical practitioners." Controversy on the subject has been raging for some years. The present arrangements are not only grossly inadequate to look after the eyes of those who need attention to them, but are also inadequate for those who are already entitled to and in need of treatment or of sight-testing and equipping with glasses under current insurance schemes. The increased strains, risks and demands of modern civilisation make it particularly necessary to take this problem more seriously.

Pharmacy

While the optician in many cases both prescribes and makes spectacles the pharmacist usually dispenses medicines to the prescription of a medical practitioner. He is, like the optician, in a dual position, being a retailer, as well as a professional man, and in his retailing capacity he sells large quantities of products some of which, like camera films, have no connection with the health services while others, such as remedies for common ailments, are bought on the initiative of the individual and yet others, including poisons, involve special responsibilities. The "chemist" is therefore in a strategic position and it has been found necessary to restrict practice to members of the Pharmaceutical Society, which is bound to admit qualified persons and has power to remove a member from the Register only by a decision of its Statutory Committee. On the Society are devolved such important duties as enforcing the law relating to pharmacy and poisons and of registering authorised sellers of poisons. The chemist plays an important part in National Health Insurance, and nearly £2½ millions a year are spent under the scheme in purchasing drugs and appliances for insured persons at the chemists in Great Britain.

Other Medical Auxiliaries

In addition there are several other incipient professions and trades which give curative treatments. Some, such as bio-physical assistants, act under a medical practitioner while others, such as chiropodists, and some masseurs and masseuses, practise independently, although some authorities such as the L.C.C. have secured and used licensing powers over them, and they also have professional organisations. In 1936, on the initiative of the British Medical Association, an unofficial Board of Registration of Medical Auxiliaries was set up. The B.M.A. generally oppose State registration for those professions whose services they consider should only be available to the public under the supervision of a general practitioner. As in the case of opticians, friction has arisen over this claim, which is resisted, for example, by the osteopaths, and a clarification of the relationships of these growing professions seems desirable in the public interest.

The National Health Insurance System

An account is given of the origin in 1911 and subsequent workings of the National Health Insurance scheme, covering with certain exceptions all persons over 16 years old, male and female, British or alien, who are employed in the United Kingdom or in British ships, except those engaged in non-manual labour at a rate exceeding £250 a year. Contributors who have ceased to belong to the compulsory group and some others are entitled on certain conditions to adhere to the scheme at their own option. There were at the end of 1936 just over 19 million insured persons under the scheme in Great Britain. The health insurance share of weekly contributions is 4½d. from employees (4d. from women) and 4½d. in each case from employers. There is a relatively small State grant. Benefits are of three main types. The most expensive is cash benefit, especially sickness pay, at standard rates of 15s. a week for men, 12s. a week for single women, and

10s. a week for married women, subject to a number of strict conditions. In this category also come disablement and maternity benefit. The second universal type of benefit for compulsory contributors is medical benefit, covering a general practitioner's services and provision of necessary drugs or medical or surgical appliances. The remaining benefits are "additional"—that is, they vary according to which of the 859 "approved societies" in Great Britain the insured person has elected to join. These approved societies, which are unofficial, administer the scheme under the supervision of the central departments, with the exception of statutory medical benefit which is administered by local insurance committees. A few approved societies impose on their members an employment, religious or temperance test, but most are open to all comers from anywhere in Great Britain. Two societies, the National Amalgamated and the Prudential Approved Society for men have two million or more members, and another (the Prudential for women) has over one million. To a very large extent the approved societies are run in connection with a business of industrial assurance.

Societies covering 8½ million members make some addition to the standard sickness and disablement benefit. Societies covering a majority of the insured population also provide additional treatment benefits for medical and surgical appliances, and dental, ophthalmic and convalescent home treatment, but a large minority are without some or all of these.

Criticisms of National Health Insurance

The existing scheme of National Health Insurance is open to many criticisms. The Royal Commission of 1926 found that the local insurance committees administering medical benefit are redundant bodies. Some of their functions have lapsed to the central departments and the rest could be carried out by the local authority. Some of the most constructive, such as health propaganda and the investigation and fixing of liability for excessive sickness rates, have never been carried out effectively. The approved society system also causes obvious inequities. A new entrant to Health Insurance is virtually compelled to choose one approved society or another, vaguely knowing that some will give better cover than others for the same subscriptions, but without having the slightest hope of finding out which is best. The result is a senseless dissipation of members among many different societies, which inflates the cost of administration, and especially of checking claims. Even in a town the size of Glasgow the Royal Commission found that there were at one time 98 societies represented by only one member each.

Nominally the approved societies are democratic bodies, but the democracy is a sham. Two of the largest societies, with memberships exceeding a million, have a quorum at general meetings of 50, including officers and the committee. Notices of the meeting are not issued to members nor do they receive any report either of the meeting or from the Committee of Management. Even the very small societies show little sign of democratic vitality. The Irish Free State has recently abolished all the competing societies within its jurisdiction and set up a unified national society in their place. While unemployment benefit and unemployment assistance provide dependants' allowances which vary receipts according to size of family, sickness benefit makes no allowance for dependants and is at a lower rate, although a sick person and a family with a sick breadwinner presumably need more than they would in case of simple unemployment. This anomaly causes great distress and places doctors in embarrassing positions.

The system has many other deficiencies, the greatest being the limited cover it offers in relation to the total risks. It does nothing for dependants of insured persons, and even the insured often find that their particular need, such as an illness demanding specialist advice or a denture, is either not covered by the scheme, or not covered by the society which they have joined, or is covered only to such a small extent of the actual cost that they are still in very serious difficulties.

The Extension of National Health Insurance

The foregoing criticisms of National Health Insurance show that it is still far from making available the services of a general practitioner to every member of every family, quite apart from covering other health risks. We consider that the making universal of general practitioner services is one of the most urgent conditions of an adequate national health policy, and that the most practicable way of securing this object is by a reform and extension of national health insurance. The popularity of the contributory method and the capacity of wage-earners to pay for extra health facilities is indicated by the large number and membership of purely voluntary schemes, such as the hospital contributory schemes with more than 5 million subscribers of between 2d. and 4d. a week, and many other schemes providing general practitioner service. One of the advantages of such schemes is that they confer a right and involve specific payment for the service, while adjusting the terms to the wage-earner's capacity to pay. The cost of collection and administration on a voluntary basis is however excessive and the contributor does not get his money's worth. This is particularly obvious in the analogous case of industrial life assurance, where working-class families often pay up to 1s. or more a week in premiums, one-third of which are swallowed up in management expenses.

The most important class not covered in any way by National Health Insurance are the wives and other dependants of contributors, numbering probably some 15 millions in Great Britain. In addition there are more than 1 million independent workers and several other groups.

Estimates of the cost of extending the medical benefit of the health insurance scheme to those who are not covered show that the annual cost of bringing in dependants of the present insured class would range from £6¾ to £9 millions according to the basis adopted. We suggest that this should be met half by the worker and half by the State, in which case it would entail an extra weekly contribution of 1½d., if spread over the present insured class. For many families who are at present forced to cover their risk in more expensive ways the change would mean not an increase, but a substantial saving in their outlay.

Apart from bringing in more persons there is the problem of making health insurance cover risks at present partly or wholly excluded, such as consultant and specialist services, extended dental benefit, and maternity treatment. As regards maternity, we consider that, as in almost all other countries, health insurance provision should be made for medical and other services during confinement, and the existing cash benefit should be reduced. This would help the creation of a national maternity service which is at present very slowly emerging. We propose that specialist services should be provided for the existing health insured class and their dependants at an estimated weekly cost to contributors of ½d., the State again bearing half. We also propose that dental benefit should be extended to all insured workers.

We estimate that all the above extensions would require an addition to the existing health insurance contribution of 3d. a week for each person, bringing the total to 7d. for men and 6d. for women, while the total State contribution would be about £8 millions gross. The spreading of dependants' risks over the whole health insured class would substantially assist families with children where the burden is heaviest and the income per head lowest. In many cases the 3d. a week would replace either regular or intermittent payments for the same purpose, often of much greater amounts. Similarly, the cost to the State would be offset to a large extent by savings in other directions, since the failure to provide adequate treatment in time, and to levy half the amount of the risk when the contributor can pay, often means that more expensive treatment or maintenance has eventually to be given wholly or largely at the public expense. There is, of course, the much wider issue of the avoidable waste and suffering involved in allowing so many illnesses and defects to reach an acute stage through years of neglect.

There is a strong case for reducing the disparities in benefit between different contributors to National Health Insurance, and for replacing the approved societies by a structure more suited to contemporary needs.

The Hospital System

The British hospitals are partly public (maintained and controlled by local authorities), and partly voluntary (maintained and controlled by independent charitable associations). They may also be classified as either general or specialised in function, and as teaching or non-teaching hospitals.

Voluntary Hospitals

There are in Great Britain just over a thousand voluntary hospitals. In 1935 they had a total income of £16 millions, a capacity of about 80,000 beds, and treated about 7 million patients, of whom 1¼ millions were in-patients. All the medical schools except the post-graduate school at Hammersmith are linked to voluntary hospitals, and most British medical research is done in them. In England and Wales (excluding London), 27 per cent of the 1935 hospital revenue came from voluntary contributory schemes; 22 per cent from patients' payments; 20 per cent from subscriptions and donations; 8 per cent from local authorities and nearly all the rest from investments and legacies. There has recently been a growing dependence upon patients' payments and contributory schemes, with consequent changes in the nature of control. In Scotland the patients pay relatively much less and investments and legacies bear nearly half the burden.

Hospital schemes of insurance have over 5 million voluntary contributory subscribers, on behalf of at least 10 million persons, including dependants. Convalescent home, ophthalmic, surgical, and dental treatment and other additional benefits are provided for a large proportion of these. Nearly six million out-patients annually attend the hospitals, and out-patient departments are liable to be overcrowded with people who could equally well be treated by general practitioners, to the detriment of the services given to those for whom hospital treatment is essential. General wards of hospitals are restricted to families earning as a rule less than £6 a week, but middle-class "paying patients" are often also taken in separate blocks or wards.

A great part of the medical work is done by the "honorary staff," whose hospital appointment brings prestige and patients to their private practice. Thus the voluntary hospitals are able to attract the best men, part-time, to their service, while whole-time appointments in public hospitals are definitely less attractive to the profession. The business side of the hospital is under lay administrative officers, and much of the contact with patients, including assessment of their payments, is done by women almoners.

The voluntary system has made it hard to arrange to assign patients to the hospital which can best treat them, and in many cases the size of the hospital or its range of functions are not such as to secure the most efficient working. For medical teaching and for the training of nurses large general hospitals are essential.

Attempts are being made to improve co-ordination both regionally and by maintaining common services such as the Central Bureau of Hospital Information. The various advantages and drawbacks of voluntary hospitals are discussed.

Public Hospitals

Although public (or local authority) hospitals do much less out-patient work than the voluntary hospitals, they provide nearly three-quarters of available hospital beds in Great Britain. In several respects their functions differ; for example, infectious diseases are almost entirely dealt with in public hospitals, which also deal with most maternity and "chronic" cases. Before the 1929 Local Government Acts there were hardly any public general hospitals, but the power then given to "appropriate" former poor law hospitals and the abolition of Boards of Guardians, have given rise to a local authority-controlled system of general hospitals nearly comparable in scale with the voluntary system. The transition from the "poor law" days is, however, by no means complete, and the pace of adjustment varies greatly in different areas. Public hospitals are under local democratic control like any other municipal service, and are financed mainly out of local rates and Exchequer block grants, patients' payments being extremely low. The medical staff is mainly salaried and whole-time, and this system has certain advantages and also certain drawbacks compared with the practice of the "voluntaries."

In and around Greater London and in certain other areas, a comprehensive general public hospital service is being developed, while elsewhere no such arrangements exist, and it will in any case be a long time before the old "poor law" buildings and equipment can be wholly superseded. One of the great weaknesses of the system is its dependence upon local government areas rarely, if ever, corresponding with the most natural and efficient region which the hospital, if untrammelled, would serve. Almost everywhere the needs of patients and of hospital efficiency are cut across to varying degrees by arbitrary administrative boundaries and by lack of adequate reciprocal arrangements. The excellent but exceptional arrangements in such areas as Aberdeenshire and Gloucestershire throw into relief this general shortcoming.

National Hospital Problems

There is a real and at times a serious shortage of hospital beds in Great Britain, although analysis of the long waiting lists of some hospitals shows that the shortage is not as bad as it appears, and in an emergency a bed is always found. The existing resources are, moreover, not used to best advantage, and a British Medical Association Report in 1935 on fractures brought out the utter failure of large numbers of hospitals to effect a satisfactory proportion of cures, owing largely to lack of fracture clinics. Local authorities find that certain types of case can be better dealt with in voluntary than in public hospitals and make grants accordingly, while other cases are referred from voluntary to public hospitals. There is increasing co-operation between the two systems, but it still has a long way to go. The complete merging of the two is not to be expected within any reasonable period, but the trend in finance, administration, staffing and other matters is bringing the formerly rival systems closer together and an effort to bridge the gap by suitable liaison arrangements might now give good results, both locally and nationally. The hospital problem is essentially regional and should be approached according to the needs of the region served, without reference to arbitrary and extraneous factors such as local government boundaries and divisions between the voluntary and public systems. Each of these systems possesses much of value to the other and it is against the public interest that competition between the two should ever take the form of refusal to co-operate where common action is of advantage. In some respects there are inequities to be removed and we consider, for example, that as essential public service institutions the voluntary hospitals should be exempt from local rates and from legacy and succession duties.

We consider that uneven and unco-ordinated development of the health services has thrown an excessive burden upon hospitals generally, and that developments on the lines suggested in other chapters should reduce their relative importance in the health services, although, of course, their greater efficiency will always remain a vital consideration.

Convalescent Homes and Nursing Homes

Logically, the convalescent and nursing homes are part of the hospital system, but in practice they are largely divorced from it. There are 400-500 convalescent homes mostly run by private philanthropic effort, with a total of 24,000 beds used by some 250,000 persons a year. Many of these are so out of touch with one another and with the hospitals as to cause a serious waste, and some of them are of a low standard. Nevertheless, they are an essential element in the health services, and their extension is desirable, provided that the defects brought to light are met.

Nursing homes are places where patients are treated and accommodated for profit, and complaints of unsuitable buildings, unqualified staffs and poor conditions led ten years ago to the enforcement of their registration by the local authorities. Inspection is still inadequate and a murder trial in 1936 centred round an unqualified nurse in charge of an unregistered nursing home. Under present conditions qualified nurses are often reluctant to take posts in nursing homes. The nursing home owes its existence to class and income distinctions, and it seems both likely and desirable that in the long run it will be replaced by the hospital paying ward. This, however, cannot happen at any rate for many years, and higher standards should be enforced.

Special Services

Under this heading summaries are given of the provision for sufferers from mental disorder and mental deficiency, tuberculosis, venereal disease, cancer, crippling, blindness, deafness and dumbness.

Provision for Mental Patients and Mental Defectives

Since 1930 the word "lunatic" has been replaced in England and Wales by "mental patient" and "asylum" by "mental hospital." The net cost of mental hospitals in England and Wales in 1935-36 was £8¾ millions, and of certified institutions an additional £1¼ millions. There are nearly 180,000 certified mental patients in Great Britain, and the number is increasing. Of these nearly 160,000 are maintained out of public funds, the cost of maintenance averaging over 26s. per patient per week. It was officially estimated in 1929 that there were in addition not less than 300,000 mental defectives in England and Wales, or 8 per 1,000 of the population, including about 100,000 children. Investigation has shown that the incidence is increasing. It is higher in rural than in urban areas. Proposals for research and for improved methods of dealing with the problem are discussed.

Tuberculosis Service

Tuberculosis is divided into pulmonary and non-pulmonary cases. Of the former about half prove fatal and the proportion of cures is not improving, but the fast and steady fall in new cases shows that prevention is making progress. In non-pulmonary tuberculosis the number of new cases is falling at about the same rate, but here there is also a substantial rise during the past ten years in the proportion of cures. Between the ages of 10 and 40 tuberculosis still kills more people than any other disease. Undoubtedly poverty, bad housing and under-nourishment are predisposing causes of tuberculosis. The falling number of cases shows that present methods of prevention are effective up to a point, and suggestions are made for improving the service, which is already a demonstration of what can be done by a well-considered and adequately-financed preventive organisation.

Venereal Diseases Service

Venereal diseases are treated free at 186 centres in England and Wales, and 52 in Scotland. It has not been considered advisable to attempt to compel notification or treatment, and no satisfactory statistics of cases are obtainable, but it is known that very large numbers of persons under treatment default before its completion. Parliament refused leave to Edinburgh in 1928 to introduce compulsory control over infected persons. Under the Venereal Diseases Act 1917, treatment by unqualified persons is prohibited, and private advertisements of alleged cures are forbidden.

Cancer

Cancer mortality has greatly increased since 1900, but the increase is almost entirely due to more accurate diagnosis, and above all to the increased proportion of people in the age groups in which cancer is most serious. Intensive research has not yet cleared up the causes and cure of cancer, but earlier diagnosis has increased the chances of cure and the growing resort to radium treatment in place of operations has given good results, not only directly, but also indirectly by making patients less reluctant to seek early treatment, The scarcity and expense of radium have led to an interesting experiment in organisation, with a National Radium Trust to purchase radium and a National Radium Commission to distribute it when it is needed to 13 national centres and to a number of secondary regional centres. The problem of access, however, remains serious, and it is officially estimated that out of 40,000 cancer cases likely to benefit by radium treatment only about 8,000 are receiving it. A revision of the system must, therefore, be looked for.

Cripples

The care of cripples in Great Britain depends on co-operation of voluntary and public agencies. Few local authority areas have sufficient populations to justify independent provision for cripples, and like many other regional, rather than local, services, provision for cripples is often neglected, despite the fact that most crippled children, for example, can be cured with proper treatment, and those not cured can, at least, be made into happy and almost self-supporting citizens. Owing to pioneer work some forty years ago Shropshire, Herefordshire, Cheshire and four adjoining Welsh counties have a large-scale regional centre near Oswestry, but many areas are so poorly served that even the numbers of their cripples cannot be estimated.

Blindness

In 1936 there were in Great Britain 76,000 registered blind persons, nearly one-third of whom were aged over 70, and half of whom were between 40 and 70. The Blind Persons Act 1920 was designed to remove the assistance of the blind from ordinary public assistance. A great part of the care of the blind is done by voluntary bodies acting on behalf of local authorities, and nationally there are strong organisations. Several thousand of the blind are employed in suitable occupations. Efforts to check blindness from birth, which is partly due to venereal diseases, are being made by the local health services.

The Deaf and Deaf and Dumb

There were estimated in 1932 to be in Great Britain about 38,000 deaf mutes ("deaf and dumb") and 2,803 blind deaf. The number of persons who are deaf only is unknown, but the recent fall in numbers of children attending special schools for the deaf suggests a tendency to decrease. The proportion of deaf and dumb on poor relief is more than twice the proportion of all persons on poor relief, but the disability has not been felt sufficient to justify specific provision like the Blind Persons Act, and their supervision is left to voluntary bodies.

Medical Research

Owing to the efforts of a few men, medical research in Great Britain has been very thoroughly planned and intelligently developed during the past twenty years. The main central agency concerned is the Medical Research Council, which runs 21 investigation committees directing and co-ordinating research in their various subjects. The Council has a budget of about £165,000, and makes many grants to hospitals, universities and research stations, in addition to the research work which it carries out direct, through the National Institute for Medical Research or otherwise. By arrangement, research on certain short-term problems is left to the central administrative departments of State. Much research is also done by unofficial bodies. Two of the most pressing needs seem to be for more research to be done on the borderline between medicine and sociology and economics, and for a very much more powerful public relations mechanism to explain and disseminate as widely as possible discoveries which are otherwise neglected.

Genetics and Public Health

Immigration and emigration, birth control, differential class fertility and other factors are constantly modifying the composition of the nation, and therefore its health and capacities. We are, in fact, constantly and arbitrarily interfering with the future endowment of the British nation, but we are doing so blindly, unconsciously, and in some cases with disturbing results. Is it, then, possible and desirable to try to improve the stock, or at least to eliminate some of the worst stock? We discuss information about hereditary defects, and show that the incidence of mental defect has markedly increased during the past generation in England and Wales. There is a large class of people, including mental defectives, who are of relatively inferior stock, and who furnish society with the bulk of its inefficient adults—criminals and unemployables. Voluntary sterilisation is desirable on the general lines recommended by the Departmental Committee in 1933, possibly with modifications to make the scheme more workable. We point out that voluntary sterilisation is in practice now available to the rich and denied to the poor. Sterilisation, however, can only play a limited part in bringing about improvement. The subject requires much more research and collection of information through field inquiries, and is inseparable from the question of population policy as a whole. Adequate instruction in genetics should be provided for in the training of public health administrators.

Nutrition

Recent scientific investigation has led to a new view of the importance of nutrition as a factor in health. Some diseases prove to be wholly and others partly due to deficiencies of protective food substances, including not only vitamins but phosphorus, calcium, and so forth. Measures against malnutrition are therefore of vital importance, but unfortunately available data about the extent of malnutrition in Great Britain are very faulty, and confusion has arisen through the use of the term in several conflicting senses. Malnutrition is undoubtedly widespread in the sense that many people would be taller, heavier and healthier if they had had a different diet, including more fresh milk, fruit and vegetables. Poverty is a serious cause of malnutrition, but there are others. Efforts are being made to effect an improvement by the milk-in-schools and milk-in-industry schemes, by free solid meals for school-children and by supply of milk and other products at welfare centres, but the consumption of certain products essential for adequate nutrition, and especially of milk, is very unsatisfactory. Proposals are made for nutrition policy to be developed on the lines of:

(*a*) More effective measures to reduce costs of production, and above all of distribution;

(*b*) Readjusting national policies in order to secure free and unrestricted supply, without any element of taxation, of foods essential to nutrition;

(*c*) Propaganda and education to effect the necessary changes in national spending habits and diet;

(*d*) Subsidies to lower the prices of certain essential foods, or to bring specially cheap or free supplies to those shown to need more nutritious food and unable to afford it.

It is suggested that a subsidy of some £2½ millions gross, or less than £2 millions above the subsidy paid in 1936-37, would suffice to finance the diversion of 100 million gallons of milk from manufacture to liquid consumption by mothers and children who most need it. This is about four times the consumption under the existing milk-in-schools scheme.

Physical Education

According to a recent B.M.A. Report: "The aim of physical education is to obtain and maintain the best possible functioning of the body and thereby to aid the development of mental capacity and character." The low level of physical education in Great Britain is apparent in any crowd of workers or shoppers or spectators. Provision for physical education in the schools is still meagre, and suffers severely from the priority given to the claims of the examination system. Of boys and girls between 14 and 18 it is estimated that probably about 70 per cent receive no proper physical training. The provision after school age is chiefly voluntary, and there are hardly any facilities for men. The Miners' Welfare Fund and a number of leading firms have made provision for workers, and the Ministry of Labour provide centres of physical training for some of the unemployed. The Physical Training and Recreation Act 1937 provides for spending about £4 millions in three years on promoting physical fitness, largely through grants to voluntary bodies, and through the establishment of a National College of Physical Training, to produce more of the necessary instructors and organisers. The Government has therefore assumed the main initiative and responsibility for seeing that physical education is more adequately developed in future, but the actual work will still fall largely on voluntary bodies and on local authorities.

Psychological Medicine and Mental Health

Recent research has shown that a considerable range of mental disorders can be treated successfully by psycho-therapy. The War and recent industrial and economic strains have brought to the fore the problem of psycho-neurosis. In Scotland and elsewhere sample inquiries have shown that from about 25 to 40 per cent of long sickness absences, mostly certified as due to organic troubles such as gastritis and rheumatism, are primarily due to psycho-neuroses. The provision for treating such cases, and research in methods of treatment, are still on a very inadequate scale. Expansion of research and training facilities is urgently needed, not only on health grounds, but on account of the contribution it could make to education, to criminology, and more generally to the removal of social frictions.

ERRATUM

Page 22, line 12, of paragraph on 'Physical Education' for "£4 millions" read "£3 millions".

Health Education

Although there have recently been great improvements, from a health standpoint, in national diet and ways of living, a vast amount of health education needs to be done in order to bring public practice reasonably abreast of scientific knowledge. The scale of existing attempts at health education is too small and they are often dwarfed by commercial advertising for products of dubious value, or distorted by excessive insistence upon particular diseases, or else handicapped by failure to employ modern publicity technique. There have, however, been considerable improvements recently, notably at the Ministry of Health, which is now fully alive to the importance of this aspect and is at present running a national "Use Your Health Services" campaign. A number of proposals are made for expansion of health education, both in the schools and generally.

Peckham Pioneer Health Centre

An account is given of this interesting health research unit, consisting of a social and recreational club with a membership restricted to entire families living within a limited artisan area of south London. The building contains a large swimming bath, round which are grouped a gymnasium, library, cafeteria, and nursery with doctors' consulting rooms and laboratories above. The centre does not give treatment or replace any existing medical service, but all members are thoroughly overhauled on joining and are afterwards kept under observation for purposes of record and in order to advise them when they need treatment. A survey of 1,666 members of 500 families showed only 144 individuals and 17 babies with no diagnosable disorder. Many unsuspected cases of kidney disease, diabetes, cystitis and heart disease were brought to light, and it was shown that many people who appear in perfect health are suffering from hidden disorders bound to lead to eventual breakdown if not dealt with in time. Much material of medical and sociological value is being collected through the Centre.

Administrative Experiments

An account is given of the Highlands and Islands scheme, which secures a fairly comprehensive medical service for a very large and thinly populated region by grants from the Department of Health for Scotland to doctors for attendance, at special reduced fees, upon families of insured persons and of members of the cottar and crofter classes. A nursing service has also been organised and hospital and specialised treatment are available, with a central base at Inverness and suitable outlying centres to serve the region. Before the scheme the medical needs of a large part of the population were almost wholly neglected, and both the inhabitants and the local authorities are so poor that a self-supporting service would be impossible.

The Gloucestershire Medical Services Scheme deals with a typical rural area and its description indicates what can be done in bringing the local general practitioners and the public and voluntary health services, including hospitals, into a comprehensive system.

Are We Getting Healthier?

The many available health statistics supply fairly accurate and complete measurements of longevity and of the incidence and causes of premature death, but they are much less reliable guides to the incidence and nature of sickness, and there is no adequate material regarding the general physical condition apart from recognised illness. The figures used here refer to England and Wales. It is often supposed that longevity has much increased, but this is not the case. The expectation of life for a man of 75, which was six years in 1871, has risen only by five months in the last sixty years. What has happened since the beginning of the century is that mortality rates have fallen sharply between the ages of 1 week and 75 years (80 years for women). Below one week there has been very little improvement, and the rate during the first day of life is still so high that if it persisted for two months only half the children born would survive that period.

By the age of a fortnight, however, the death rate is enormously reduced, and at all ages on until 75 it is now substantially lower than at the start of the century. The improvement is, however, much less marked between 15 and 25 than at any other ages up to 65 for men and to 70 for women. There are great local differences. For instance the national death-rate for boys and girls aged 1-2 has fallen by more than 60 per cent since 1900, but the counties of London, Northumberland and Durham have rates well over twice as high as S.E. England outside Greater London. The greatest falls between 1911 and 1934 at ages 1-15 occurred in deaths from tuberculosis, diarrhœa, measles and bronchitis. The most important single causes of death at 1-2 are pneumonia and measles, at 2-5 pneumonia and diphtheria, and at 5-15 accidents for boys and diphtheria for girls. Influenza is the only disease which causes at these ages many more deaths now than before the War. Fatal accidents, in spite of increased road dangers, are appreciably lower. At later ages the principal causes of premature death are tuberculosis, and also accidents in the case of men only. At 60-70 cancer and heart disease account for half the deaths. Actually recorded mortality rates from these two have changed very little since 1913, but they have relatively increased owing to the great reductions in death rates from other causes at these ages. There is evidence that a great improvement has occurred in general powers of resistance at these ages and that early senescence is becoming rarer, even after allowance is made for the growing reluctance to ascribe deaths simply or primarily to old age.

Deaths are a very misleading index of the incidence of sickness, and in some extreme instances where a protracted type of disease has greatly declined, such as tuberculosis, the fall of new cases has led to an increased ratio of deaths. Deaths from encephalitis lethargica have lately actually outnumbered new cases by almost two to one. One-third of all cases of sickness analysed from health insurance records are due to bronchitis, tonsilitis, colds, influenza, etc., but this group only accounts for less than one-twelfth of total deaths, and nearly half of these are at ages over 70, when old age must be a contributory cause. Heart disease, on the other hand, accounts for one-quarter of all deaths and only one-eightieth of cases treated. Anæmia among women has, according to the records, been more than halved since 1921.

Statistics for health of school children are comparatively full. Cases of notifiable diseases show very striking two-year and four-year cycles in measles, the peaks and troughs since 1930 being even more pronounced than in the 'twenties. There is little indication of any tendency for cases of infectious diseases among school children to decline.

The Cost of Ill-health

It is impossible adequately to summarise here the figures relating to the cost of ill-health, which cannot usefully be discussed without the many qualifications given in the text. Broadly speaking, the public and private annual expenditure on treatment and maintenance of the sick, and on immediate measures for the prevention of ill-health, may be estimated for Great Britain at the present time at something of the order of £200 millions. Work lost through sickness, and expenditure on services less directly concerned with health, such as sewerage, account for very large sums, which can also be estimated, although with an even wider margin of error. There is a conspicuous contrast between the vast expenses and loss caused by ill-health and the relatively insignificant sums spent on health research and education.

Conclusion

Having briefly examined the structure and working of each of the British health services, we conclude by discussing a number of more general points. What, after all, is health? In addition to the actual cases of sickness or disablement which prevent people from carrying on ordinary occupations there are far larger numbers of people suffering temporarily or permanently from less acute defects or injuries which are not bad enough to unfit them for work or play and may often be unnoticed, but nevertheless reduce their efficiency and happiness, and often develop into more serious trouble later on. No contemporary health policy can be reckoned adequate which does not deal with the second of these groups as well as the first. A purely salvage role is untenable for the health services: they must find out how to prevent ill-health and organise the necessary measures.

This involves a great widening of scope and outlook, for social and economic conditions determine health problems and many of the greatest opportunities for improving the national health lie outside the specifically health services, in such fields as housing and town and country planning, education, distribution, transport, industrial design, labour management, social and economic research, and public relations. Every agency able to help in improving health should be enlisted in the appropriate manner, and every agency liable to create ill-health should be examined in order to eliminate or reduce this risk. Many factories and offices, for instance, are regularly producing and distributing large quantities of ill-health in addition to their ostensible business output.

The health services suffer greatly from confusion and overlapping, and in order to minimise this we propose their reorientation around the general practitioner, who should be enabled to bring the resources of the health services on the one hand into contact with the needs and peculiarities of the individual patient on the other. The present status of the general practitioner is unsatisfactory because he is too overburdened with routine work to exercise judgment and to act as an effective health adviser, with the result that he tends to be short-circuited by one unco-ordinated specialised agency after another. The proposed reorientation would involve increased efforts to reduce the general practitioner's load to manageable proportions by general efforts to promote healthy living and by cutting down the number of neglected complaints involving prolonged curative treatment. It involves raising the standards of personnel, training and equipment of the general practitioner, and checking the unbalanced growth of specialist agencies. It implies a more comprehensive basic health service, readily available, and eliminating avoidable geographical, administrative or financial impediments.

The general practitioner, however, cannot function satisfactorily unless he has behind him a range of better co-ordinated and less fragmentary health facilities of a more specialised nature, to which cases can be readily referred where necessary. Study is needed not only of the diseases and disabilities of the human body but of the health services themselves, with their cancerous growths of redundant institutions and committees needing drastic surgical treatment.

One of the basic problems of co-ordination is the relationship between voluntary and public bodies, which is particularly acute in the health services although not confined to them. There is a great deal of muddled thinking about the voluntary principle, and we try to analyse the different types of organisation to which the term voluntary is applied, and their scope, merits and drawbacks as compared with public agencies, with which they have increasingly to co-operate. We also show that the public health services are enormously hampered by piecemeal and anomalous methods of organisation which have no justification upon health and administrative grounds and involve waste of resources and increased suffering or inconvenience to the consumer. The needs for wider regions as a unit of operation, and for more businesslike internal arrangements are reviewed. On personnel we show that the amount of time and money required to enter medicine exercises a strong and probably undesirable selection among possible candidates, while the existing training fails in some respects to make the most of those who enter, and the conditions of practice or employment for qualified men and women sometimes prevent them from making the best use of their time and equipment. Many of the new health problems demand wider views and a fuller range of techniques than most medical men are able to acquire during a training which tends rather to isolate than to bring them into touch with social and economic problems, and investigation is needed of improved methods of utilising, for example, recent advances in the science of administration, in statistics, and in public relations work. The growing non-medical bureaucracy of the unofficial health services has peculiar problems of its own.

We consider that a great deal of readjustment and co-ordination can be effected without additional expenditure, and even with the result of savings in certain directions. Development on the basis of *ad hoc* campaigns and passing interests is, however, increasing the confusion of the health services, and it is time for those concerned to clear their minds about priorities and about gaps to be filled as opportunities arise. Our own suggestions on priorities are: first, better use and improved arrangement of existing services; second, the expansion of measures for improving nutrition on the lines sketched in Chapter XI; third, the provision of general practitioner services for dependants of insured persons on the lines suggested in Chapter VII; and fourth, increased research and information, especially upon the working and defects of the existing health services and upon industrial and social causes of ill-health.

On finance, we show the need for discriminating between the actual expenditure, public and private, upon dealing with sickness or disablement, and the distinct and much larger economic loss sustained for example through dislocation of business, loss of earning power and other items not appearing in any ordinary balance but none the less real. On this account it is economically unsound to take a narrow or immediate view on health expenditure, because £1 of new expenditure at a strategic point, although apparently difficult to "afford," may well save several pounds worth of existing expenditure already falling at some remote point on say public assistance or private incomes, or as a charge on industry.

The taking of wide views is made unnecessarily difficult through the grossly excessive number of channels from which the finance of many health services is drawn under present arrangements. Even a wage-earner's denture may be paid for partly out of three or more different funds each controlled by different administrators, involving a senseless duplication of correspondence and committee work. The fact that the British wage-earner wants and is willing to pay for more medical attention is indicated by the large number and membership of the voluntary schemes which have sprung up for this purpose.

Finally we discuss the impact on the health services of vast commercial advertising campaigns which dwarf or even distort essential information and advice provided by responsible authorities, and which often play on the ignorance and credulity of the consumer by diverting demand to unnecessary or even harmful products at the expense of more important but less vociferous services. We end by emphasising that our efforts will have served their purpose if they stimulate those concerned with the British Health Services to look at them less as a mass of separate institutions and more as a whole in relation to the national life, especially from the standpoint of the individual user or consumer.

The above summary is only intended to give a general view of the arrangement and findings of the Report, and for any specific subject reference should be made to the relevant section where the necessary qualifications and explanations will be found.

I. ADMINISTRATIVE MACHINERY

Introduction—Central Departments—Statutory Bodies—Local Authorities—The Supervision of Voluntary Bodies—International Health Services.

Introduction

In the last one hundred and fifty years there have grown up vast organisations for the preservation and improvement of health which are sometimes under the direct control of the State, sometimes closely connected with it, and sometimes entirely independent of it. Nor does the organisation stop at national boundaries, for there has developed an international organisation to deal with health problems.

Historically, the State has been drawn into health work for several reasons. After the dissolution of the monasteries the State made itself responsible for the care and health of the destitute poor. From early times in urban communities it was realised that the community alone could control the sale of food, the disposal of sewage and similar functions. Little, however, was done to exercise such control until the middle of the nineteenth century, when cholera scares and the revelation of actual working-class conditions in industrial areas forced the rulers of the country to realise that the health of the whole community could only be protected by creating efficient environmental health services. The development of these services helped to mould the modern structure of local government. For example, sanitary authorities have become urban district councils and rural district councils. The medical profession, as it grew in power and importance, and as curative work became ever more profitable, desired to regulate itself and to prevent the untrained from masquerading as doctors, and so sought and obtained powers from the State. It has been thought advisable therefore, to give a brief outline of the administrative machinery, particularly of the central and local governments, before proceeding with our account and criticisms of the health services. A critical analysis of the administrative machinery will be given when the particular service with which it deals is described, and here only a general sketch is attempted.

Central Departments

In 1919 the Ministry of Health was created to take over the powers and duties of the Local Government Board, the Insurance Commission, the Welsh Insurance Commission and the Privy Council under the Midwives Acts. The Ministry only deals with England and Wales, and partly for this reason the Medical Research Council was placed under a Committee of the Privy Council. The Minister of Health was also given the powers of the Board of Education in respect of expectant and nursing mothers and children under 5, and later most of the powers of the Home Secretary under the Lunacy and Mental Deficiency Acts. He also obtained other powers, and any powers connected with the health of the people may be transferred to him. He exercises some of his powers over the Welsh services through a Welsh Board of Health which has offices in Cardiff. The Board of Control, which is the supervising body for the services for mental patients and mental defectives, is responsible to Parliament through the Minister of Health.. The General Register Office is in the same position.

In Scotland the supervision of the health of the nation is in the hands of the Department of Health for Scotland, which was also set up in 1919 to carry out the same work as the Ministry of Health. The General Board of Control for Scotland is responsible for mental patients and mental defectives. The political head of the Department of Health is the Secretary of State for Scotland, who is also responsible for the General Board of Control.

In fact, the functions of these central departments are, broadly speaking, supervisory, since the only health service which they administer centrally is the National Health Insurance Scheme.

The Ministry of Health and the Department of Health for Scotland are also concerned with aspects of government other than those which could strictly be described as health aspects. They administer directly the contributory pensions scheme. As legatee of the Local Government Board, the Ministry of Health is concerned with linking together the central and local governments. For example, if a local authority in England and Wales wishes to borrow money for any purpose it has to obtain, in most cases, the sanction of the Minister of Health, even if the service has no connection with those over which the Minister has authority. In Scotland a similar function is exercised by the Secretary of State for Scotland through either the Department of Health or the Scottish Office.

Since the reforms initiated by the Local Government Acts of 1929 the central departments have aimed at securing a large degree of autonomy for the large local authorities. The replacement of 'percentage' grants for specific services by 'block' grants, which can be expended as the local authority chooses, assisted this development. On the other hand, the central departments still exercise a very considerable financial control over the local authorities by their power to sanction or refuse a loan, and by general inspection and through the operations of the District Audit.

The power of central inspection is indeed a vital part of the public health services. There is, however, no formal system such as that used by the Board of Education. Circular 1072 of the Ministry of Health states that "the principle underlying the Local Government Act 1929 is that local authorities should have as much freedom as possible in administering the health services."

Inspectors also watch over the administration of other aspects of local government, such as public assistance. Besides carrying out supervisory work, they act in a consultative and advisory capacity. The inspectors' business is, broadly speaking, to see that the law is properly observed, and they use their influence and authority to this end. If their persuasion fails the Minister has power to seek a remedy in the Courts. The Minister further exercises influence and control by the issue of model rules and by-laws; by granting or withholding special powers under certain Acts, often after a local inquiry; by periodical surveys in given areas; and by the weight which necessarily attaches to his recommendations when Parliamentary sanction is required for the grant of powers to any local authority. There is also an important, if intangible, factor represented by the general recognition among local authorities that the central department is the repository of wide experience, whose opinions and advice on proposed major developments must be respected. This leads to a great deal of informal contact by correspondence and interview between the department and the local authorities.

Attached to the Ministry of Health are several advisory committees which may have an increasingly important part to play in the preservation and promotion of the health of the nation. They include, for example, the Advisory Committees on Nutrition, on the Care and Supervision of the Blind, and on Water. Attached to the Department of Health for Scotland are the consultative councils and the Advisory Committee on Medical Administration and Investigation.

The Ministry of Health and the Department of Health also appoint representatives on a number of bodies, e.g. the Boards of Governors of the London School of Hygiene and Tropical Medicine, the British Post-Graduate Medical School, the Central Council for Health Education, and the Radium Commission.

His powers over the health of school children and their medical inspection the Minister delegates to the Board of Education. But co-ordination is secured by the appointment by the Board of the Chief Medical Officer of the Ministry of Health as C.M.O. of the Board. The school medical service in Scotland is run entirely from the Department of Health.

The Ministry of Health, however, is not the only department closely connected with the administration of the British health services.

The Home Office is responsible for the inspection of factories and the administration of the Factory Acts throughout Great Britain. For this purpose it employs factory inspectors and medical inspectors to ascertain that the proper safety regulations are enforced, that occupational disease is as far as possible prevented, and that measures are taken for the promotion of the health of the factory workers. The Certifying Factory Surgeons are thus connected with the Home Office.

The Mines Department of the Board of Trade also employs a Medical Inspector of Mines, who is responsible for the health and safety of mine-workers throughout Great Britain. The Board of Trade itself administers the Merchant Shipping Acts, which are concerned with the safety and health of seamen. The Ministry of Transport administers the Railway Employment (Prevention of Accidents) Act, which provides for safety measures for railway employees. The University Grants Committee, which is appointed by the Treasury, assists medical education. Since the departments specifically concerned with health do not cover the whole of Great Britain the Medical Research Council was put under the administrative direction of a Committee of the Privy Council. It applies money voted by Parliament or received from private sources to the promotion of medical research.

Statutory Bodies

There are several autonomous bodies with statutory powers which are closely connected with the administration of the health services in the country. They include the

General Medical Council, the Dental Board of the United Kingdom, the General Nursing Council for England and Wales, the General Nursing Council for Scotland, the Central Midwives Board and the Central Midwives Board for Scotland, and the Council of the Pharmaceutical Society. These bodies control respectively the medical profession, dentistry, nursing, midwifery and pharmacy. They may impose penalties for unprofessional conduct, and regulate the conditions of entry to the profession.

Local Authorities

The carrying out of the local statutory health services falls primarily on the local authorities, notably the county councils, the county borough councils, the district councils and the corresponding authorities in Scotland. Sometimes these councils must by law maintain a committee to deal with a particular subject, such as the Mental Hospitals Committee. Frequently they combine to run a joint service, such as the provision of Infectious Diseases Hospitals. Sometimes different classes of authorities covering the same territory have power to run the same service; for instance, maternity and child welfare may be a district service in a part of a county and a county service in the remainder. In Scotland the districts into which the landward (or non-urban) part of all counties except Nairn and Kinross are divided have certain powers delegated to them. The table in Appendix I sets out the division of the services among the various authorities.

The local authorities' health services are financed out of local rates, loans and grants in aid, and payments for services rendered. The loans have usually to be authorised by the central departments. Grants in aid, of which the largest is the "block grant," or the "General Exchequer Contribution," are made by the central government. Sometimes a system of payment for services rendered or "recovery of cost" for particular services is in existence whereby the beneficiaries are charged for some portion of the services they receive.

Grants in aid of the health services are either block grants, specific grants related to approved expenditure, or basic grants made for specific services and calculated as a result of a variety of considerations according to the service rendered. The block grant system is probably destined in the end to cover the whole health services except those mentioned below. But its introduction since 1929 has been gradual and vestiges of the earlier systems remain. The block grant is adjusted every five years. It is weighted according to the local conditions of the county or county borough, the size of the population, the size of the population in relation to the extent of the territory of the area, the rateable value of the area, the amount of unemployment and other factors. Specific grants for the school medical service are related to approved expenditure and weighted with a view to taking into consideration such factors as the average attendance at elementary schools. The work of Port Health (Port Sanitary in Scotland) authorities is assisted by a 50 per cent specific grant and maternity and child welfare authorities receive £20 for every trainee who qualifies as a midwife or a health visitor. The new maternity services also carry a specific percentage grant, but it is especially provided that this shall ultimately be merged in the block grant. The grants for housing are calculated primarily on the basis of the work done.

The grants are allocated to the counties and county boroughs in England and Wales and to the counties and larger burghs in Scotland. In the counties the grant is again distributed to the municipal boroughs and the districts in England and Wales and to the burghs and districts in Scotland on the basis of a calculation allowing for the difference of functions between, for example, a rural district council and an urban district council, and of the populations in any of these areas.

The Supervision of Voluntary Bodies

Voluntary bodies play an important part in the health services and an integral feature of this work is their relative freedom from official control. There is, nevertheless, some measure of public supervision of their activities. Thus the Charity Commissioners exercise a general control in England and Wales over certain types of voluntary bodies, but their jurisdiction only relates to charities whose funds are derived from endowments or to that portion of the charity which is dependent on funds drawn from endowments. Such charities must provide the Commission with an account of their annual income and expenditure, but the Commission are not required to audit those accounts. The Commission also possess powers of arranging for their administration if the Trusts concerned have wholly or partly failed.

Voluntary bodies obtain certain advantages by incorporation and many are therefore incorporated. Incorporation is itself a form of control. If a voluntary body wishes to secure incorporation it has to make application to the Board of Trade, which institutes a series of inquiries into its position before registering it under the Companies Act 1929.

The Board possesses power to revoke registration. A Royal Charter is only granted after the very closest scrutiny of the aims and objects of the charity, and the modern Charters all provide for an annual audit by a member or members of a recognised body or society of accountants and the presentation of accounts to an annual meeting. Incorporation by Private Act of Parliament entails an even closer scrutiny. Incorporation by any of these methods does not exempt a charity from the supervision of the Charity Commission.

Charities defined under the War Charities Act 1916 and the Blind Persons Act 1920 are subject to a more specific control. The power of the purse also enables local authorities which subsidise voluntary bodies, as so many of them do, to exercise some control over them. But this control is dependent on a variable factor. The supervision of voluntary bodies engaged in the health services is, in fact, comparatively slight, and many escape supervision entirely. Yet many voluntary bodies are able as charities to claim valuable privileges from the State, notably in the shape of exemption from income-tax.

International Health Services

Besides the national health services there are international services. These are primarily concerned with the control of infectious diseases and are described in Chapter II. Their chief administrative organs are the International Health Office in Paris and the Health Committee of the League of Nations.

Not only are there these inter-governmental organs for co-operation in the health services, but there are also independent international organisations such as the International Union against Tuberculosis, the Association Professionelle Internationale des Médecins and the International Council of Nurses, which co-ordinate the work of their constituent bodies.

II. IMPERSONAL PROTECTIVE SERVICES

Environmental Services. Housing: Evidence of Overcrowding and Slum Conditions—Housing and Health—Measures for Abolition of Slums—**Sanitary Arrangements—Street Cleansing and Refuse Removal—Water Supply—Atmospheric Pollution—Prevention of Noise—The Protection of the Food Supply:** Introduction—Legislation for Ensuring the Safety and Purity of the Food Supply—Administration of Laws Relating to Safety of Food Supplies—Milk—Inadequacy of Laws relating to the Purity of the Food Supply and Deficiencies in their Administration—The Composition of Foods—The Law Relating to Advertising—The Inadequacy of the Law—The Recommendations of the Departmental Committee on the Composition and Description of Food—Conclusion—**Control of the Trade in Medicines:** Legislative Control of the Trade in Medicines—Results of the Lack of Protection of the Consumer—The Taxation of Medicines—Recommendations—**The Control of Infectious Diseases:** International Services—Port Health Authorities—Notification and Control of Infectious Diseases—Vaccination—Conclusion.

It is impossible for a report on the British health services to ignore the importance of the environmental services—such as the provision of adequate housing, water supply and sewerage arrangements and the improvement of amenities—in preventing ill-health. But it is impossible to deal fully with these services since each has special administrative, financial, engineering or technical problems of its own, which are only partly health questions. Here the most important are touched on and their intimate relation to health shown. We start by a brief outline of the bearing of housing conditions on health, with special reference to overcrowding and slum conditions. Sanitation, water supply and pollution of rivers and of the atmosphere are next treated, followed by prevention of noise. There are, of course, many environmental services with which it has not been possible to deal here, some of which, such as town and country planning, are likely to prove of great importance to the national health in future. This chapter simply outlines some of the environmental services already recognised as of primary health importance. The second part of the chapter deals with the legislation and administration governing the safety and purity of the food supply and that controlling the trade in medicines. Again we have been unable to deal with many parts of the services. For example, we have not dealt with the work of the veterinary profession in connection with the health of livestock and the healthiness of the foods derived from them, such as milk. The third part of the chapter briefly describes the service for the prevention and control of infectious disease.

It was the creation of these services in the nineteenth and twentieth centuries that overcame much of the sickness and high mortality rate which followed the congregation of large numbers of people in urban areas during the industrial revolution. These services represent in fact the first great advance of preventive medicine applied to a whole country. Probably the fall of 50 per cent in the death rate, which occurred during the period in which the basic British sanitary system was being built up in the nineteenth century, can be directly ascribed to the effects of these services.

Clean drinking water helped to check cholera, of which the last great scare occurred in 1865. Adequate sewerage arrangements protected the water supply. The wells and cesspits in close proximity began to disappear, at least from the towns. The provision of piped water supplies enabled townspeople to wash. Lice and fleas retreated before soap and water, and with them went typhus and plague. Sewerage schemes and organised scavenging gave less chance to the rat and consequently also to plague. Drainage systems reduced dampness and consequently rheumatism. Wherever light and air were introduced the death rate from consumption fell. At the same time these gains were consolidated by strict control of the ports. Other factors supplemented and continue to assist the work of these services. Cheap cotton shirts and cheap soap are an aid to cleanliness; cheap mass-produced clothes and footwear enable the population to protect themselves against the weather. Mass-produced bicycles and cars take town-dwellers into the fresh air. Cheap and varied foodstuffs help them to resist disease.

ENVIRONMENTAL SERVICES

HOUSING

It has long been realised that slum housing breeds disease, partly because it is insanitary; partly because of the bad structure of the houses; partly because the sites of the houses are often unhealthy; and partly because overcrowding in itself leads to unhealthiness. A number of factors produce slums and slum conditions. There is the area with a high density of population per acre, but not necessarily overcrowded in regard to room space, and there is the area where the population per room is overcrowded. In many cases these conditions are coincident, but they need not necessarily be so. The first leads to a severe deficiency of light, open spaces and playing fields; the second to insanitary and unhealthy home conditions. A dwelling may be overcrowded but perfectly fit to house a smaller number of people, or it may be unfit for human habitation.

Evidence of Overcrowding and Slum Conditions

The 1931 census affords evidence of overcrowding per acre. For example, in Southwark there were in 1931 151.7 persons to the acre; in Shoreditch, where there are no open spaces, 147.5, and in Bethnal Green 142.4, whereas in Westminster there were 51.8 persons per acre, and in Woolwich 17.7. In Gateshead there were 39.1, in East Ham 42.8, but in Reading there were 10.7, and in Brighton 11.8.

The recent Report on the Overcrowding Survey in England and Wales, 1936, gives a detailed analysis of overcrowding per room in England and Wales. The survey covered working-class houses, and the definition of this type of house adopted by different authorities affects the accuracy of the completed figure. There were further variations in the methods adopted by the different authorities which also affect the total figure. Two general standards of overcrowding were used. The first was that a house was deemed to be overcrowded if any two persons of opposite sex over 10 years of age, and not being "persons living together as husband and wife," had to sleep in the same room; the second was based on a number of calculations taking into account the age of the family and the size of the room related to a common standard that one room should house two persons, two rooms 3, three rooms 5, and four rooms 7½, five or more 10, with an additional "two in respect of each room in excess of five." If the second standard was found to apply no record was made of overcrowding under the first standard. In fact, under 500 cases of overcrowding under the first standard were discovered which were not combined with overcrowding under the second standard, according to the returns received at the date of the publication of the Report on the Overcrowding Survey in England and Wales, 1936. The tables in this survey do not take into account the first standard; nevertheless, they reveal far from creditable conditions. The number of houses inspected was 8,924,523, and 341,554 were found to be overcrowded. The conclusion reached, therefore, was that about 3.8 per cent of the families in England and Wales were living in overcrowded conditions. The extent and distribution of overcrowding is also set out in the report. For example, in Shoreditch, 17.2 per cent of the working-class families were overcrowded; in Stepney 15.4 per cent; in Hampstead 2.5 per cent; in Sunderland 20.6 per cent, and in Bournemouth 0.3 per cent. In Hebburn urban district 25.2 per cent were overcrowded. In County Durham, which was the worst county (including the county boroughs), the figure was 12.0 per cent, whereas in the Isle of Wight, the best county, it was 0.7 per cent.

An interesting commentary on the survey is afforded by the survey carried out in Leeds under the Act. Here, besides the statutory standard, a local standard was adopted. This was the same as the statutory standard except that no account was taken of the living room for sleeping purposes, and a house was deemed overcrowded if any person over 10 was sleeping in the same room as a person of the opposite sex, except as husband and wife. The comparative results of the application of these standards to 71,585 houses are set out below.

	Statutory Standard		Local Standard	
	No. overcrowded	Percentage	No. overcrowded	Percentage
Sex standard only	2	—	1,556	—
Formula standard	2,343	—	13,571	—
TOTAL, either standard	2,345	3.27	15,127	21.13

In the Report itself an approximate estimate was made of the amount of overcrowding in the country, if a hypothetical standard which would have normally provided sufficient accommodation for families without using the living room accommodation for sleeping purposes was used, and it was shown that instead of 342,000 overcrowded families there would probably have been 853,000.

In Scotland conditions were shown by the overcrowding survey to be worse even than the census returns had indicated. According to the 1931 census, 44 per cent of the population were living in houses of one and two apartments, and 15 per cent were living in rooms housing 4 or more persons. The overcrowding survey carried out in 1936 showed that about 22.6 per cent of the working-class families in Scotland were overcrowded on statutory standards. But at Coatbridge the figure was 40.91 per cent; at Port Glasgow 42.14 per cent; at Clydebank 44.91 per cent; and at Motherwell 40.49 per cent. It was little better in some of the mining towns and villages in Fife, Lanarkshire and West Lothian, the figure for Lanarkshire (excluding burghal areas) being 36.79 per cent. In Edinburgh, the best of the cities, it was 17.17 per cent, and in Inverness, the best of the large burghs, 11.27 per cent. Sometimes the conditions found were horrifying. For example, one room was occupied by 11 persons consisting of a husband, wife, five sons aged 24, 22, 14, 11 and 8 years; and 4 daughters aged 17, 13, 9 and 6 years. A number of single-roomed houses were each occupied by two families. Moreover, the survey was not carried out with the attention to detail which characterised the survey south of the Border, since the need for immediate action was so pressing.

Some of the conditions disclosed by commissioners appointed by the Department of Health for Scotland and by the department's own inspectors, can only be described in the words of the annual report of the department for 1936 as "almost beyond belief." They included an area which had a density of 905 persons per acre. In one case "a four-storey tenement contains 16 houses with access by a common entrance, then by stairs to the flats above, and thence by common lobbies to the houses. The defects consist of broken wall-paper, worn floors which are loose and off the level, sagged ceilings, loose and worn window sashes, dampness, darkness and bug infestation. One of the tenants complained that the bugs dropped into the food. The wife of another tenant gave birth to a child in a bed which the district nurse stated was literally moving with bugs." Another one-roomed house contained bed boxes with earth floors below, which harbour snails. This house had no water closet, and the windows of the room had to be nailed shut. Nine persons inhabited it, including a woman in an advanced state of tuberculosis. In another block of ten houses containing 58 persons, water was obtained from one tap at the end of the block which, when it was turned on full, took half an hour to fill a pail with water. The only sanitary arrangements were two privy middens.

Housing and Health

Some interesting correlations were found in some Glasgow figures between the height and weight of children and the size of houses they inhabited. There were figures for the years 1907, 1924, 1931 and 1936. The number of children involved was 19,159, 3,600, 49,060 and 50,515 respectively. The comments in the annual report of the Glasgow school health scheme on the table setting out the correlation were:

"(*a*) The average heights and weights of the children bear a direct relationship to the size of the houses occupied by the families; that is to say, the smaller children come from the smaller houses, and the larger children from the larger houses.

(*b*) Between 1907 and 1936 increases in the average measurements are shown for children of the ages inspected, 5, 9 and 13 years, in each size of house. The average height and weight of the children in the single-apartment house in 1936 exceeds the averages shown since 1907.

(*c*) It is noteworthy that the improvement is more marked at the ages of 9 and 13 years and least at age 5 years."†

---

† This illustrates the need for nursery schools in slum areas. See chapter IV, pages 114-119.

No imagination is needed to link overcrowding to the stunted physical and mental conditions of the slum population. The lack of light and air, the insanitary conditions and the difficulties of maintaining privacy and cleanliness, or even of carrying out hygienically such ordinary domestic duties as cooking, all help to contribute to the deterioration of the life of the slum dweller. It can be shown that a number of persons inhabiting slum areas are the wrecks of society, and that both hereditary and environmental conditions contribute towards this state; for example, it is often found that the incidence of mental deficiency is high in slum areas, and it is not possible to suggest that it is produced entirely by environmental conditions. A high infant mortality rate and a high death rate from pulmonary tuberculosis are frequently associated with bad housing conditions. All these factors can be ascribed both to environment and to congenital traits, and to the interaction of both in varying degrees.

OVERCROWDING AND INFANT MORTALITY

Column A—Percentage of working class families overcrowded.*
Column B—Infant mortality 1935 per 1,000 live births.
(England and Wales 57 per 1,000)

County Boroughs

Most crowded	A	B	Least crowded	A	B
Sunderland . .	20.6	92	Bournemouth . .	.3	40
Gateshead . . .	15.2	90	Northampton . .	.8	51
South Shields . .	13.1	80	Grimsby . . .	.9	62
Tynemouth. . .	13.0	63	Croydon . . .	.9	44
West Hartlepool . .	10.9	88	Oxford . . .	1.0	31
Newcastle-on-Tyne .	10.7	86	Doncaster . . .	1.0	62
St. Helens . . .	8.8	94	Derby . . .	1.0	60

* Report on the Overcrowding Survey in England and Wales.

Other Urban Areas

Most crowded	A	B	Least crowded	A	B
Hebburn	25.2	87	Eastleigh . . .	.2	46
Prudhoe	19.6	76	Urmston . . .	.3	33
Morpeth	18.7	69	Clacton . . .	.3	54
Berwick-on-Tweed .	18.3	66	Bedwellty . . .	.3	60
Jarrow	17.5	114			
Felling	15.8	98			
Bedlingtonshire . .	15.2	65			

Many other factors besides the amount of overcrowding probably help to determine the infant mortality rate, such as the standard of living in the area, which governs the state of nutrition of the children, climatic conditions and the efficiency of the medical services. Tables comparing areas in the same neighbourhood may therefore be more informative.

The following table, taken from the Report of the Committee on the Scottish Health Services, shows the incidence of tuberculosis in terms of size of houses for Glasgow in 1932.

Number of Apartments	Pulmonary Tuberculosis	
	Cases (Rate per 1000)	Deaths (Rate per 1000)
1	1.762	1.400
2	1.497	1.149
3	1.308	0.723
4	0.827	0.463
TOTAL CITY	1.401	0.924

The following tables from Sir John Robertson's *Housing and Public Health*, 1925, illustrate the connection between the death rate from tuberculosis and the infant mortality rate and bad housing areas.

Birmingham

	Death rate per 1000	Pulmonary T.B. Death rate per 1000	Infant Mortality per 1000 live births
Birmingham			
Large slum area . .	21.1	1.93	171
Fair artisan . .	12.3	1.11	89
Manchester			
Slum area . .	23.86	3.32	166
Populous area, mainly artisan . . .	12.93	1.07	112

These figures do not prove that overcrowding is alone responsible for abnormal death rates, since the less crowded the area, the higher, in general, is the average income of the inhabitants. Consequently it is probable that children and others are on an average better nourished in the less crowded areas. This factor might well partly determine the mortality rates. Moreover, in some of the new areas the average age of the population is lower than it is among any unselected group in England and Wales as a whole. Thus, the crude death rate from all causes may be expected to be lower, but not the infant mortality rate, or the death rate from tuberculosis, which mainly affects young people.

Dr. F. C. S. Bradbury carried out an investigation between October 1930 and December 1931 on the incidence of tuberculosis in Tyneside towns, for the National Association for the Prevention of Tuberculosis. He found a greater incidence of tuberculosis in Blaydon than in Jarrow, and ascribed it partially to overcrowding. He found also that 54 per cent of the tubercular families in Jarrow and 40 per cent in Blaydon were overcrowded.

The Medical Officer of Health for Greenwich reported in 1933 that "of 156 patients with pulmonary tuberculosis, 90 were sharing beds, 29 had separate beds but not separate rooms, and 37 had separate rooms." It has been shown also that the clearance of a small slum area in Glasgow, by diminishing the tuberculosis cases, produced a saving in three years of £32,000. Similarly, the clearance of an area in Glasgow in two years reduced the death rate among children by one half.

Better housing is often associated with strikingly lower mortality rates. Crude death rates do not give a fair comparison since the age composition on housing estates is very different from that of other communities. But the qualification does not affect the comparison of infant mortality rates. The following figures for Birmingham illustrate the differences which occur.

	Infant Mortality (per 1000 live births.)	
	Corpn. Estate	City as a whole
1929	72	79
1930	58	69
1931	59	71

Dr. G. C. M. M'Gonigle, however, has produced some evidence from Stockton-on-Tees to show that improved housing conditions do not necessarily lead to lowering of the death and sickness rates, and may actually lead to a rise in these rates, unless they are accompanied by an income sufficient to offset the increased rent. The Medical Officer of Health for Sunderland conducted in 1936 a detailed inquiry into the conditions obtaining among 445 families containing 2,250 persons who had been removed from slum areas to new housing estates in the previous five years. He concluded as a result of the inquiry "that there are a large number of families removed from slum areas to new housing estates who have difficulty in obtaining essential food values to maintain a healthy standard of living."* Besides the increase in rent, one of the chief causes of this, as in many similar cases, is the increased cost of travelling, which may absorb a quite appreciable proportion of the family income. Of course, this evidence merely shows that poverty, involving bad housing and lack of adequate food and clothing, is the factor that most affects the health of the population. Dr. Spence, in his limited but intimate study among 125 city children in Newcastle-on-Tyne, found that 17 had pneumonia, and 32 were affected by chronic or recurrent bronchitis. There was a record also of an attack of measles in 46 cases. He concluded that: "These results denote that there are children who can be brought up in a state of relatively good health in poor housing conditions, where no doubt the fault is compensated by good mothercraft, efficient housekeeping, and their good fortune in escaping serious illness at an early age. On the other hand this examination of the housing conditions shows that there is a direct relationship between overcrowding and ill-health or malnutrition. If serious illness and improper diet be accepted as the prime cause of these, the overcrowding in bad housing conditions must be looked upon as an important contributory factor, fostering as it does the chance of mass infection, and impairing the efficiency of the parents in their task of providing a proper and adequate diet for their children."*

---

* Annual Report of the Medical Officer of Health for the year 1936—County Borough of Sunderland.

He recommended that a further, more detailed and larger inquiry into the causes of these diseases should be carried out. His statements were upheld by the Committee on the Scottish Health Services, who stated that the evidence they had taken justified the following conclusions.

(*a*) Highly congested housing conditions influence the incidence of the infectious diseases of childhood such as measles and whooping-cough. Measles spread rapidly among children in congested tenement houses, and it is serious in proportion to the youth of the children who contract it. The majority of the children in better residential areas escape the infection until they reach school age.

(*b*) The occupants of small dwellings succumb more readily to pulmonary tuberculosis. Comparing the single-apartment dwellings with those of larger size, the incidence in the former is twice as great, and the death rate three times as great.

(*c*) For diseases of the respiratory system (pneumonia, etc.) and the infectious diseases of childhood, there is an inverse ratio between the death rates and size of house. Briefly, those infections whose mode of spread is direct from person to person by means of "droplet" infection, tend to be more common and more severe in small overcrowded and congested dwellings.

Measures for Abolition of Slums

Local authorities have long had powers to build houses for the poorer sections of the population. But since 1919 subsidies have been provided by the central government towards assisting the building schemes of these authorities. Further, as a result of the Housing (England and Wales) Act 1935, it has become a penal offence, in the majority of local authorities' areas, to permit fresh overcrowding, and minimum standards of housing accommodation have been set up. The Housing (Scotland) Act 1935 has the same provisions, but these will not be generally enforced for some time.

The number of working-class houses built with State assistance and the amount paid under the various Acts from the Armistice till March 31, 1937, were as follows:

England and Wales	Number of Houses.	Government Contributions
		£000
Housing and Town Planning, etc., Act 1919 . .	174,635	109,158
Housing (Additional Powers) Act 1919 . . .	39,186	9,498
Housing, etc., Act 1923	438,047	25,162
Housing (Financial Provisions) Act 1924 . .	520,298	32,576
Housing (Rural Workers) Acts 1926 and 1931 .	11,875	105
Housing Act 1936 (Section 105)	136,044	2,317
Housing Act 1936 (Sections 106-8) . . .	1,070	5
TOTALS	1,321,155	178,821

---

*Page 139 *Poverty and Public Health*, by G. C. M. M'Gonigle and J. Kirby.

	Number of Houses
Total completed under Housing Acts:	
By local authorities	907,628
By private enterprise and housing associations	423,723
TOTAL	1,331,351*

Scottish Acts	Number of Houses
1919	25,550
1919 (Additional Powers)	2,324
1923	50,530
1924	83,460
1930 (General)	45,670
,, (Houses in Hostels) . . .	498
1931	494
1933	1,780
1935	1,144
Not yet allocated	1,094
Government steel and demonstration houses	2,569
TOTAL	215,113
Local authorities	
Ordinary schemes including de-crowding	108,933
Slum clearance schemes . . .	63,127
Private enterprise	42,409
Public utility societies	644
TOTALS	215,113

The total number of working-class houses built without State assistance in the same period was just under two million in England and Wales, and 44 thousand in Scotland.

Under the Housing Acts 1930, measures have been taken by local authorities to establish the number of houses which are unfit for human habitation and to demolish and replace them. Under the Housing Acts 1935, the local authorities have determined the extent of overcrowding in their areas, and are now engaged in preparing schemes for eliminating overcrowding. It is impossible in this report to go into the question of housing in detail, particularly since P E P has already devoted a complete report to it (*Housing England*, published 1934). It must suffice to point out here that the provision of adequate housing is closely linked with the national health problem. Some of the problems which await solution, such as the desirable density of population, and whether flats in central areas are more suitable than cottages situated in the suburbs, must materially influence the state of health of the nation. For example, if cottages in the suburbs are considered most suitable the inhabitants may have to travel long distances to their work and the fares may seriously impair their slender resources. The importance of the decentralisation of industry from a housing and health point of view cannot be over-emphasised. The type of house, moreover, that is built, may have a definite effect on the health of the inhabitants; for example, the facilities for cooking and storing food are important. Undoubtedly more research should be carried out on the problems of the most suitable types of houses for families of varying size. Unsatisfactory housing breeds ill-health, and moreover, where dwellings are overcrowded or unsuitable, it also becomes necessary to make expensive institutional provision for maternity cases, for infants, and for patients requiring certain types of care who might otherwise be more satisfactorily dealt with in their own homes. The completion of the campaign to ensure a satisfactory minimum national standard of housing, both in urban and rural districts, is therefore an indispensable foundation of a national health policy. While the current drive against slums and overcrowding is helping substantially in this direction, it cannot be assumed that the standards set, although an improvement on previous conditions, are satisfactory from a health standpoint.

---

* Includes houses built under the 1925 Housing Act without Government contribution.

SANITARY ARRANGEMENTS

Sanitation and the proper disposal of sewage are among the first essentials of public health. In urban areas, the major problems were solved in the nineteenth century, largely from the impetus of public feeling aroused by the cholera outbreaks between 1831 and 1865, which led to the Public Health Act of 1875 (applicable only to England and Wales), the appointments of local medical officers of health and sanitary inspectors throughout Great Britain, and the formation of the Local Government Boards. The great improvements effected in the latter half of the nineteenth century were undoubtedly derived from the system thus created. There is now very little risk of serious danger to public health from the lack of these services; on the other hand, the condition of many of the rivers could no doubt be improved by the modernisation of some of the earlier schemes, or by the provision of better treatment than at present.

In England and Wales the authorities responsible for sanitation are the councils of county boroughs and all county districts. The parish councils in some circumstances may also create sewerage schemes.

One of the outstanding problems in urban areas is that of ensuring that economy and efficiency are secured by joint action between local authorities where this is practicable. Much has already been done in this direction by intercommunication between sewers of adjoining districts; it is the practice, in fact, to ascertain that this course is not feasible before new works are constructed. There are, no doubt, also numbers of small, inefficient sewage disposal works which could be replaced with advantage. In some areas, the size of the works has not kept pace with the growth of the population; elsewhere, works formerly in the middle of open country are perhaps surrounded by houses; it has sometimes happened that small works have been badly designed. The cost of replacement can be reduced, in many instances, by joint action by the local authorities concerned. This may not be practicable everywhere, since expenditure on pumping and trunk sewers may be far too heavy where urban areas are far apart, or the physical features of intervening country are unfavourable; but in some parts of the country, reduced costs and increased efficiency will undoubtedly result from joint action. Fortunately, there is already a tendency for local authorities to take this line. There are now 25 joint sewerage boards. Among the large new schemes under consideration are those for the Colne Valley in Hertfordshire, East Middlesex, the Hogsmill Valley in Surrey and the Eastern Valleys of the South Wales coalfield. It is understood, also, that some of the Tyneside authorities are considering whether joint action is feasible. A very good example of what can be accomplished in this way is the new scheme for West Middlesex, which has cost over five million pounds and has replaced 28 sewage disposal works in a rapidly developing area. The benefits to be derived from co-operation of this sort are considerable. The combined schemes are usually more efficient and more economical, both in capital cost and in cost of maintenance; land is released for development, and the sanitary conditions and amenities of residential areas are improved. There is little doubt that the Ministry of Health's policy of encouraging co-operation between local authorities, both for the intercommunication of sewers and the provision of combined disposal works, will facilitate necessary improvements of this service.

In rural areas, joint action, except between adjoining parishes, is rarely practicable. The villages are often too widely dispersed, with the result that the cost of trunk sewers and pumping would be prohibitive; indeed, in many of the more sparsely populated districts which would be traversed, the need for sewerage and sewage disposal may not arise at all. Where the need does arise, as in villages with public water supplies, local schemes will usually be found to be no less efficient and more economical than central works serving a number of schemes. The large increase in the number of rural water schemes in recent years has greatly stimulated the demand for sewerage facilities in rural areas. That this need has not been overlooked is indicated by the cost of recent schemes for which loans have been sanctioned by the Minister of Health. These amounted to more than two million pounds in the years 1935-37 as compared with just over one million pounds in the two preceding years. One of the chief problems in rural areas has been that of cost. Until the passing of the Local Government Act 1929, the expenses had to be charged upon the parishes which benefited and borrowing powers were limited. The result was that in many areas schemes were impracticable. The Act in 1929 removed the restriction on borrowing powers, and enabled county councils and rural district councils to contribute towards the cost of parochial schemes. These powers have been freely exercised, and rural conditions have thus been greatly improved. The need for rural sewerage and sewage disposal is by no means satisfied, however, and there are still many rural areas where the provision of these services would benefit public health.

Local authorities have power to insist on the provision of closet accommodation in houses and factories. They also have power to examine and test the condition of any private sanitary convenience, drain, private sewer or cesspool which is in such a condition as to be prejudicial to health. The use they make of these powers necessarily depends partly on the efficiency and conscientiousness of their officials.

In Scotland the position is not so favourable. Some rural areas have no sewerage system at all. The Committee on the Scottish Health Services stated that they were impressed "with the multitude of small schemes in operation where larger schemes covering wider areas would have been more economical, more efficient, and more easily maintained at a high standard." They recommended that powers of compulsory combination should be applied to this service and made effective. Similarly the consent of the Department of Health for Scotland should be required before any local authority may borrow to lay down main trunk sewers and sewage disposal works. This power is possessed and utilised in the direction of regionalisation by the Ministry of Health in England. They also advised other modifications in the existing law.

Although local authorities in Scotland have power to insist on water closet accommodation being provided in every house, the position is by no means satisfactory. In 1934 there were in burghs where water and drainage facilities were available 29,298 dwellings without indoor water facilities and considerably more than 300,000 dwellings with water closets common to two or more dwellings.

Local authorities throughout Great Britain have power to provide public conveniences and public baths and wash-houses, which are obvious necessities in the sanitary provision of any urban area; and parish councils in England and Wales may also make these provisions in certain cases.

STREET CLEANSING AND REFUSE REMOVAL

The cleansing of streets and the collection and removal of refuse is an important service of most urban local authorities and it is important also for the preservation of health. The magnitude of the service can be judged by the fact that the annual total expenditure of local authorities in England and Wales on the collection and disposal of house and trade refuse is about £7,000,000, and the amount of house-refuse produced annually is about 11,000,000 tons, which equals about 1 ton per house, or 6 lbs. per house per day. In addition, about 1,000,000 tons of trade refuse are collected and about 70,000 persons are employed in carrying out cleansing work. The introduction of covered lorries and wagons is making the service less offensive. Modern methods for the disposal of refuse such as incineration, incineration and separation, and land reclamation have improved the service. The use of fleets of lorries has also speeded it up, but in many areas a more efficient service would be advantageous. As the dumping of refuse from built-up areas often involves the use of sites under another local authority, disputes frequently arise, and there is a particularly strong case for treating the problem on less parochial lines.

The Committee on the Scottish Health Services considered the statutory provision for public cleansing and scavenging in Scotland to be out of date and stated that a complete modern code should be framed.

WATER SUPPLY

An adequate water supply is an obvious essential for the health of any community. Pure water is a vital necessity, not only for human consumption and domestic purposes, but for cleanliness in the preparation of food and drinks. Large supplies are required also for the carrying on of many of the industries without which the population of the country could not exist, and for services such as street washing and public baths.

The duty of seeing that there is an adequate and safe supply of water rests on the local authorities—the county borough and county district councils. Parish councils may also utilise any well, stream or spring within the boundaries of the parish for the purpose of providing facilities for obtaining water.

In urban areas in England and Wales the existing supplies are, on the whole, adequate. It is true that some areas experienced shortage in the droughts of 1933-35, and that shortage would have been much more severe if restrictions had not been enforced. The droughts were abnormal, however, and supplies have been augmented in areas which suffered the worst effects.

One of the principal problems in urban areas arises from the fact that, until comparatively recently, there was no general organised planning of areas of supply and resources. The large areas of supply have been delimited, in the main, by local Acts of Parliament, which sometimes paid very little regard to anything but the immediate requirements of the areas proposed to be served. Complication has often been caused since authorities have been forced to obtain their water from places as much as 100 miles distant. Similar considerations apply also to some areas supplied by small local authorities, companies or private persons. The result has been that the limits of supply do not correspond always to the areas which could be served most economically, or that resources have not been used to the best advantage. In recent years a concerted effort has been made to ensure that requirements are met without waste of public money and water resources. It is now the practice of the Ministry of Health in their reports to Parliament on Water Bills to draw attention to instances where joint use of resources would be in the public interest. The constitution of Regional Advisory Water Committees, of which there are nine, is an important step also to planned supplies. The regions cover wide areas with common interests in sources of supply and the distribution of water; the committees make long-term surveys of the resources and requirements of their regions, and advise the constituent authorities on schemes for the planning and co-ordination of water supplies. The stimulation of joint action by Regional Committees will, no doubt, tend to increase in the future. The Joint Committee on Water Resources and Supplies recommended in their final report that additional committees should be created and that the committees should have statutory powers. These and other questions are being considered by the Minister of Health's Advisory Committee on Water. A further recent step towards the planning of water resources was the formation of the Inland Water Survey Committee, who are initiating action for the survey of the resources of Great Britain.

One of the drawbacks of the lack of planning of water supplies is the very large number of statutory authorities and private companies or persons supplying water in England and Wales. There are now 1,011 bodies supplying under special or general Acts, and 1,080 companies and persons without statutory powers. Most of the latter however, supply very small areas. Some of the areas supplied by statutory undertakers are, of course, very large already. The Metropolitan Water Board, for example, supply, in addition to the County of London, the areas of 47 districts and parts of 16 other districts with a total population of more than 7,000,000; Birmingham supplies the areas of seven authorities; Liverpool the county borough and 11 other districts; the South Staffordshire Water Company 25 districts; the Newcastle and Gateshead Water Company 16 districts; the Sunderland and South Shields Water Company 15 districts. There are also 37 joint water boards supplying more than one local government area, and very many instances where bulk supplies of water are furnished by water undertakers to other areas. It would clearly be impracticable to place the whole of the distribution of public water supplies in the hands of a few large authorities; the heavy expenditure on trunk mains and pumping, which would be necessary in many areas, would certainly make the cost to the consumer much more expensive than under the existing system. But even when allowance is made for these factors, and for the considerable populations already served by large undertakings, or by joint schemes, there is very little doubt that much economy, both of resources and of public money, would result from the amalgamation of some of the existing undertakings, or, at the least, from the pooling of resources. Moreover, a general system of regional planning and joint action for the distribution of supplies would obviate the need for some of the expenditure incurred by authorities in competing for the same sources of supply or in providing stand-by supplies.

Some of the large water undertakers spend considerable sums on research work and bacteriological examinations, for safeguarding the purity of their supplies—the work of the Metropolitan Water Board has been of especial general value. The Department of Scientific and Industrial Research also carry out research connected with water pollution and the purification of supplies. There is evidence, however, that there are still many water authorities who do not pay sufficient attention to the bacteriological examination of their supplies.

The most urgent needs of rural areas in England and Wales have now been largely met with the aid of the grant of £1,000,000 provided by the Rural Water Supplies Act of 1934 and the contributions made by county and rural district councils under the powers of the Act of 1929, to which reference has already been made. The grant, in particular, has produced very substantial results; when the schemes provisionally authorised have been completed, supplies will be afforded to 2,240 parishes at a capital cost of over £7,000,000. The improvement of rural water supplies is still continuing, with assistance from county and rural district councils. Difficulties arise sometimes in scattered areas where local sources are not readily available and the cost of bringing supplies from a distance is prohibitive. Much can be done in areas of this kind by preventing the pollution of the existing supplies, by deepening wells and even, in extreme cases, by conserving rain water to augment supplies which fail in dry summers. Information obtained by the British Waterworks Association indicates that the provision of ample piped supplies is sometimes hampered, however, by the unwillingness of the local ratepayers to bear their fair share of the cost of bringing supplies to the parishes concerned. Local propaganda will often remove difficulties of this sort.

The general condition of water supplies in England and Wales should be improved by the new Public Health Act of 1936, which puts into operation many of the recommendations of the Ministry of Health's Advisory Committee on Water. All local authorities will be required in future to survey the supplies and requirements of their districts from time to time to ensure that supplies are pure and sufficient, and that, where practicable, every house and school has a supply within reasonable distance: they will have power, also, to reject plans for new houses without proper supplies instead of, as at present, being unable to intervene until houses are built. The procedure for joint action is simplified, and better powers are available for requiring owners to provide supplies for their property, for the supply by local authorities where undertakers fail, and for the safeguarding of water from pollution.

The position in Scotland is certainly no better than that in England and Wales. The authorities responsible for seeing that there is an adequate water supply are the councils of all burghs (large and small), and county councils for the landward part of counties, including special water districts. This has given rise to a multiplicity of separate water undertakings, many of which are for areas too small to permit of the provision of an efficient service. As is so often the case in England and Wales, far too many authorities are concerned with providing water. In Fife alone there are actually thirty separate authorities.

Closely related to the question of water supplies is the problem of river pollution. Many large authorities already draw supplies from the lower reaches of rivers: in some rural areas small parishes could no doubt be supplied if streams were purer. The enforcement of the general law is in the hands of local authorities; but fishery boards and various bodies with special local powers, such as certain water undertakers and conservancy boards, also have powers. In a few cases, joint committees, such as the West Riding of Yorkshire Rivers Board, have been constituted for large regional areas. These authorities have sufficient financial resources to employ expert officials and can supervise the whole length of rivers instead of parts only, as is the case where individual local authorities are responsible. The Joint Advisory Committee on River Pollution to the Ministry of Health has recommended, in its Fourth Report (1937), that the formation of river authorities in whom should be centralised the functions relating to river pollution prevention, land drainage, fisheries, water abstraction and in suitable cases navigation, should receive immediate consideration. The Public Health (Drainage of Trade Premises) Act 1937 (applicable only to England and Wales), which is based, to a large extent, on recommendations made to the joint committee, should facilitate the receptions of trade wastes into public sewers, and so remove some of the worst causes of pollution. The Department of Scientific and Industrial Research has done a good deal of research into the causes of river pollution, particularly where trade wastes from new industries such as the manufacture of beet sugar and milk products are concerned. The prevention of pollution has already been helped by this work, especially where factories have been placed in rural areas on streams which were not previously subject to pollution by industry.

ATMOSPHERIC POLLUTION

Clear, fresh air and sunlight are valuable elements in health, yet in many urban areas for weeks at a time the air is continuously polluted by smoke and the sunlight blotted out by a black pall. Undoubtedly some of the respiratory diseases, such as tuberculosis, pneumonia and bronchitis, which account for more deaths than any other groups of diseases, may be aggravated by the amount of smoke inhaled in large towns. Direct evidence of this is afforded by the increase in deaths from respiratory diseases among London boys and the high death rate from bronchitis in particularly smoky areas. Further, absorption of the sulphur acids in smoke indirectly damages the tissues of the lungs and by preventing oxidisation may cause heart failure. Moreover, the cutting off of ultra-violet radiations which "activate" the formation of vitamin D in the skin, and consequently enable the body to utilise important foodstuffs, seriously affects the health of town dwellers.

The Public Health Act 1936 enables local authorities in England and Wales to carry out the inspection of nuisances caused by smoke. Local authorities may also make by-laws concerning the emission of smoke. These relieve an authority from the task of proving that a nuisance has been caused where smoke of the character prescribed by the by-laws is emitted, and forces the defendant to show that no breach of the law has been committed. Mines and iron and steel processes may only be prevented from causing a nuisance by emitting smoke if the prevention does not "obstruct or interfere with any process" or the working of the mine. But the Minister may exclude any of these processes from the benefit of this exemption and include others. Further, local authorities are enabled to undertake or contribute towards the cost of investigations to study means of reducing the smoke nuisance. The problem of regional administrative areas once more arises and undoubtedly they should be larger. Only one joint statutory district smoke abatement committee has been set up, although several regional advisory committees are in existence. Nothing has yet been done to cope with the major problem of domestic smoke. But the Public Health Act 1936 enables the local authorities to make by-laws regulating "stoves and other fittings in buildings" and may represent the opening of an attack on the domestic smoke problem. The Public Health (London) Act 1936 contains even more stringent provisions in regard to smoke than the Public Health Act which is only applicable in the provinces. It is enacted, for example, that every furnace shall be constructed so as to consume its own smoke.

There is statistical evidence that even so acute an evil as the London fog can be lessened. Thus in 1881-1885 the loss of sunshine in the central area, as compared with Kew, was 80 per cent, against 50 per cent in 1931-35. This is probably due both to the increasing use of gas, electricity and smokeless fuel, and to the abatement of smoke by improved methods of combustion. The migration of population to the outer suburbs must also have helped.

The 1936 Act does not extend to Scotland. Moreover, in the Scottish counties the Public Health (Scotland) Act of 1897 alone applies, and it is less severe than the Burgh Police (Scotland) Act 1892, and the corresponding provisions of the Local Acts which take the place of the 1892 Act in the case of Edinburgh, Glasgow, Aberdeen, Dundee and Greenock, under which most of the control over the pollution of the air is carried out.

Additional protection to the community is afforded by the Alkali, etc. Works Regulation Act 1906, under which control is exercised over the pollution of the air by poisonous and noxious gases from specified chemical factories. The administration of this Act is carried out by the Ministry of Health and the Department of Health for Scotland. In England and Wales power has been given to the Minister to extend its provisions. The Committee on the Scottish Health Services suggested that legislation should be introduced to control the emission of sulphur fumes from large power stations. Since these are frequently owned by local authorities, and since the problems of control are more akin to the problems of the factories in the chemical industry, the proposed legislation should be administered centrally.

Research work into the prevention and reduction of the smoke nuisance is being carried out by the Department of Scientific and Industrial Research and other bodies, to the cost of which many industrialists subscribe. The Alkali Inspectors of the Ministry of Health also give advice to local authorities and to manufacturers as to the various means of preventing smoke and grit emission. In some parts of the country, classes for engineers and stokers are held. Some new power stations in the London area owe their relative freedom from nuisance to the work of a committee under the chairmanship of the Government Chemist. Some private firms have spent a considerable amount of money in research into the elimination of some of these nuisances. The Smoke Abatement Society is working to call the attention of the authorities concerned and of the public to the evils caused by smoke.

PREVENTION OF NOISE

The problem of the prevention and elimination of noise has not yet been dealt with in the same way as other environmental problems of this nature, partly because it is a problem which has only become acute in the last twenty years. Yet responsible medical opinion holds that, apart from the effect of noise in preventing sleep and rest, particularly in hospitals, noise can have a disastrous effect on the nervous system. Moreover, the efficiency of workers is undoubtedly lessened in noisy conditions. The Anti-Noise League, under the chairmanship of Lord Horder, has been conducting propaganda to tighten up the law against this evil, and it was made an offence in 1934 to sell a motor vehicle not fitted with an adequate silencer. Other regulations regarding silencers have been introduced. The rule against use of motor horns after eleven o'clock has also had some effect in reducing noise. Under local Acts "noise nuisance" has been brought within the provision of the Public Health Act 1875 (in Scotland the Public Health Act of 1897) concerning nuisances injurious or dangerous to health. Local authorities also possess powers under Public General Acts to suppress noise by the issue of by-laws. The Home Office has, in fact, model by-laws regulating the use of wireless loudspeakers, gramophones and similar potential nuisances. The individual citizen, too, can protect himself against a public and a private nuisance through the jurisdiction of the county court, or in Scotland the Sheriff. Local authorities encourage the restriction of noise in other ways, such as by insisting in contracts on restrictions in the use of pneumatic drills. Research is also being carried out by the Technical Committee of the Anti-Noise League, by the railways, by building firms and by others interested in the reduction of noise and in the production of materials which will absorb sound.

THE PROTECTION OF THE FOOD SUPPLY

Introduction

The preservation of the safety, quality and cleanliness of the food supply is an important impersonal protective service. Contaminated food is an obvious source of danger to the health of the population and it is essential to preserve the purity and safety of the food supply. It is hardly less desirable to preserve quality and to ensure that the composition of certain foodstuffs is of a definite standard, or at least that the consumer knows what he is purchasing.

Just as the legislative and administrative system governing the environmental services previously described grew up during the nineteenth century, so the legislative and administrative system governing the safety and purity of the food supply has developed in the last sixty years. But less has been done to ensure the quality of the food supply. The problems involved in considering these services are very intricate and require examination from several angles. They necessitate consideration of the problem, for example, of ensuring that the consumer gets what he asks for, and of the ethics of advertising. In this report we cannot deal with these questions in detail but P E P has had them under consideration and has devoted Nos. 36, 63, 79 and 89 of *Planning* to dealing with these and similar topics. Here we can only deal with them as they affect health, and lack of space prevents a detailed examination.

The difficulties in the way of producing definite evidence that the consumption of particular foodstuffs has caused illness are considerable and the occasional outbreaks of food poisoning do not fully indicate the amount of harm it may do. Persons who are really suffering from food poisoning may easily attribute their illness to other causes and retailers are always anxious to make a private arrangement with the customer in order to prevent publicity. Many minor disturbances also caused by bad food probably never become public and probably are not ascribed by the sufferer to food. Consequently the importance of the food laws cannot be gauged entirely by the statements of the amount of actual food poisoning which occurs. Moreover, not only are food laws necessary to prevent illness but also to secure the requisite conditions under which a nutrition policy such as we outline in Chapter XI can be implemented.

Legislation for Ensuring the Safety and Purity of the Food Supply

The legislation on this subject began among the earliest Acts of Parliament in the Middle Ages. It was codified in general Acts in 1875 and has since been modified, and fresh general Acts have been passed dealing with various aspects of the subject, the latest being the Food and Drugs (Adulteration) Act 1928. Regulations issued under these Acts have extended their provisions very considerably. The medical officers of health and sanitary inspectors have to examine foods in preparation or exposed for sale and if these are found to be "diseased, unsound or unwholesome or unfit for human consumption," they may be condemned by a Justice of the Peace and penalties imposed on the person responsible for their sale or preparation. Certain conditions must be observed in a place, other than a factory, where food is "prepared, stored or sold." Registration and in many cases licensing for a limited period is now compulsory for all slaughter-houses. Dairies and premises used in the reworking or blending of butter or the manufacture of margarine must also be registered. Notice of intention to slaughter must be given in every case to the local authority concerned. Most fresh meat, bacon, ham and animal fat (with certain exceptions) and some meat products imported into Great Britain must be accompanied by a certificate stating that certain precautions had been observed before it was exported. Anyone who exposes meat for sale "in shops or in stores or on stalls in a street or market" must observe certain conditions. There are also regulations controlling the sale and cultivation of shell-fish. Sometimes local authorities extend by private Acts their powers of regulation under general Acts.

A public analyst must also be appointed by every county and county borough council and by some other boroughs as defined in the Food and Drugs (Adulteration) Act 1928, and by the corresponding authorities in Scotland. (In London the Common Council of the City of London and councils of the metropolitan boroughs are Food and Drug Authorities).

Administration of Laws Relating to Safety of Food Supplies

The administration of this legislation is primarily in the hands of the local authorities —the Food and Drug Authorities, the authorities administering the Public Health Acts and the Port Health Authorities (in Scotland the Port Sanitary Authorities). Some local authorities are zealous in the exercise of their powers, others are less keen. A few progressive authorities, for example, conduct general investigations into the conditions of food premises as, for instance, the recent Kensington inquiry into the cleanliness of public houses. Others rely entirely on the routine work of their inspection. In London inspectors are present at every slaughter, but this is not the case in every area. The inspector is not necessarily an expert in, for example, the problems connected with the contamination of meat and he is often employed on other duties. Public abattoirs have been established in many places by local authorities and these have locally much improved the conditions under which meat is handled.

The inspectors, of course, make extensive use of the services of the public analysts. The public may also do so in return for a fee. The number of samples officially analysed in England and Wales in 1936 was 146,438 and in Scotland 15,727.

The steps that should be taken by a medical officer of health when an outbreak of food poisoning has been brought to his notice have been set out in a memorandum by the Minister of Health. First and foremost he is advised to try and discover the vehicle of infection and prevent its distribution and consumption. At the Ministry's laboratory, any specimens suspected to be the cause of food poisoning may be examined, and in cases of a very severe nature, an official is sent down from the Ministry to investigate the causes. In 1935 137 outbreaks of suspected food poisoning were reported to the Ministry of Health and of these 116 were investigated at the Ministry's laboratory. The fact that far more cases of food poisoning probably occur than are ever reported has already been indicated, and it is failure to report or reporting too late that makes the work of the Medical Officer of Health very difficult in this respect. In Scotland the Medical Officer of Health must notify by telephone or telegram the Department of Health as soon as he is aware of an outbreak of food poisoning.

Milk

An unsafe supply of milk for liquid consumption may lead to disastrous results. The legislative and administrative system designed to secure safety is still deficient in many respects. At the same time, as we show in Chapter XI, it is extremely important to increase the consumption of milk, particularly by children and nursing mothers. Yet at the moment these are exposed to very definite dangers.

Milk may become dangerous by being drawn from a diseased cow or by being contaminated after leaving the cow. The reality of the first danger is shown by the estimate of the Committee on Cattle Diseases in 1934 that 40 per cent of the milch cows of Great Britain are infected with bovine tuberculosis, and 5 per thousand yield dangerously infected milk which, when mixed with pure milk, may contaminate 5 per cent or more of the total milk supply. The result of this is seen in the number of human deaths from bovine tuberculosis, which is partly attributable to milk. Moreover, large numbers of cattle are infected with contagious abortion and mastitis, which produce undulant fever and streptococcal diseases respectively in human beings. The second danger is more spectacular, for every few years there occurs an epidemic of scarlet or typhoid fever or diphtheria, which is attributable to the contamination of milk, either by utensils being washed with infected water or through the medium of a human carrier. There were about a hundred such outbreaks in the United Kingdom between 1900 and 1934, the most notable of which were of gastro-enteritis at Aberdeen in 1919 (1,000 cases) and of sore throat at Brighton and Hove in 1929 (1,000 families, 65 deaths). The most recent widespread epidemic was that of enteric fever in the Bournemouth-Christchurch-Poole district in August-September 1936, when there were 718 cases, of whom more than 50 lost their lives. The source of infection was traced to a cesspool which occasionally overflowed into a stream frequented by milch cattle.

We do not intend here to describe the existing control or to suggest modifications because P E P is likely to deal fully with them in a proposed Report on Milk, and also because until the proposed new legislation is introduced the subject is in a state of flux.

Inadequacy of Laws relating to the Purity of the Food Supply and Deficiencies in their Administration

Undoubtedly the conditions under which food is produced and sold in Great Britain are in many cases unsatisfactory. Little supervision is exercised over the food manufacturer, particularly of made-up meat products and ice creams, and in some cases that exercised over the retailers of food is not up to the standard enforced in other countries. A joint committee of the Society of Medical Officers of Health and of the Royal Sanitary Institute reported in 1925 "that Great Britain is practically alone among the more advanced nations in having failed to take cognisance of the existence of risk to health and of the production of disease as a result of the defective and careless exposure and handling of food and to provide legislation for the protection of the people from such risk." In fact the central departments by regulation and the local authorities by the issue of by-laws have power to carry out a much more extensive control of the sale and manufacture of food. But they probably have not powers to demand the compulsory registration of all premises used in the preparation, storage and sale of food which the Committee recommended. Compulsory registration of these premises with power to refuse or revoke it would be one measure of securing a more effective control over the cleanliness of the food supply. But it also implies a stricter supervision of the registered premises and the employment of more inspectors by local authorities.

Under a locally administered system there is a tendency for the towns to have to spend large sums in inspection and administration in trying to intercept, just before it goes down the throat of the helpless urban consumer, infected or inferior food which could have been stopped more surely and at less expense before or immediately after leaving the farm, had the rural health authority been given the necessary funds, staff, and stimulus for the purpose. This is conspicuously true of meat, where diseased carcases, which would easily have been detected at the time of slaughtering in a country district, come through so dressed and cut up that their detection near the consumer end is unsatisfactory and expensive. It is anomalous that we should require meat imported from the Argentine, for instance, to have been carefully inspected at the slaughter-house before shipment to Smithfield, where the provision for inspection is excellent, while meat from many British slaughter-houses is allowed to come on to the retail market uninspected from country districts too poor or too little interested to afford the necessary staff. In this connection it must be remembered that in its origin public health inspection has been mainly an urban and local development. In rural areas, with some bright exceptions, the service is perfunctory in what it does for farms compared with its attention to centres of population. The closing by the Ministry of Health of shellfish beds exposed to pollution, instead of allowing tainted shellfish to be distributed from them, is an example of the common-sense approach.

Some modifications of the law in regard to street trading in foodstuffs are necessary. The conditions of licensing which at present depend entirely on "road space," should be extended and a licence should only be granted if provisions are made to prevent the exposure of food to dust pollution. Medical Officers of Health, however, often find themselves in a dilemma between tolerating the sale of food in dirty conditions or enforcing standards which may drive up costs and put meat, for example, beyond the reach of the poorer families. Where food is certain to be cooked before consumption the health risks of exposure on the street are obviously reduced. Medical officers of health also sometimes find it difficult to control the resale of dirty and damaged foodstuffs, since if samples are taken at the place where they are sorted the defence is always that the goods are not intended for resale.

Meat is the only food for which "adequate transport" must be provided, but much food is quite unsuitable for sending by ordinary methods and food is sometimes transported under unhygienic conditions. Therefore there should be some legislative and administrative provisions to secure that food in transit is properly handled. In the neglect of personal cleanliness among food workers Great Britain is also lamentably behind other countries. It is true that a few employers demand a high standard of cleanliness among their workers, but no persons who are suffering from or carriers of certain diseases should be employed in the manufacture or sale of food. At present there are regulations prohibiting the employment of sufferers from or carriers of dysentery and enteric fever on food premises, but these regulations should be extended to cover many more diseases.

The Composition of Foods

The protection of the consumer from adulterated food and the maintenance of the quality of food is obviously important. The law controlling the sale of food is contained in the Food and Drugs (Adulteration) Act 1928, and other Acts. There are legal standards defining the composition of about twenty articles of food. The Ministry of Agriculture and Fisheries and the Board of Agriculture for Scotland have exercised their powers under the 1928 Act and issued regulations respecting what is to be regarded as the normal composition of milk and butter. Regulations issued under the Public Health Act 1907 prohibit the use of chemical preservatives except for two—sulphur dioxide and benzoic acid—and these only in certain foods in limited quantities. The Regulations contain a list of colouring matters which are not to be used. These Regulations are an important means of protecting the public against the danger of the use of poisonous substances for various purposes.

Under the 1928 Act there are two main prohibitions on the sale of food. No article of food should be sold which to the knowledge of the vendor has been rendered injurious to health or which is not of "the nature, substance or quality" demanded by the purchaser. We have already mentioned the provision for the appointment of public analysts. The absence of food standards except in the cases mentioned tends to hamper the effective administration of the law since it is always difficult to establish what is "below standard" for the Courts have little material to enable them to reach a decision. If anyone has sold knowingly an article containing ingredients "injurious to health" he can be prosecuted under the Food and Drugs Act, but it is often easy for him to prove that he acted in good faith.

As a result of the absence of legal standards there have been some attempts to establish standards by independent bodies. The Society of Public Analysts is constantly making efforts on these lines. There is also an arrangement between the Food Manufacturers' Association and the Society of Public Analysts regarding what should be the accepted standard of jam of two specified descriptions, though admittedly the standard is low (at least 30-40 per cent fruit in "Full Fruit Standard"), and there is the voluntary grading of farm products in connection with the Agricultural Produce (Grading and Marketing Acts) 1928 and 1931. These Acts provide that certain agricultural products which attain a designated standard shall bear a mark known as the National Mark. The voluntary nature of these standards means, of course, that they are ineffective as far as the protection of consumers of ungraded produce is concerned.

The Law Relating to Advertising

The protection of the consumer against misdescription of foodstuffs and against misleading claims in advertising is also clearly necessary in the interests of health. Under the Merchandise Marks Acts of 1887 and 1926 which regulate the labelling of goods it is an offence to apply a false trade description to goods or to sell goods falsely described, unless the person prosecuted proves that he acted innocently in the matter. Trade description includes any description, statement, or other indication, direct or indirect, as to the place or country in which any goods were made or produced, as to the mode of manufacturing or producing goods and as to the material of which any goods are composed.

The Board of Trade and the Ministry of Agriculture occasionally take action under these Acts but local authorities are not required to do so. As far as public health administration is concerned, therefore, they are useless. The effect of the Food and Drugs (Adulteration) Act 1928, is that persons can be prosecuted for selling food which they have described inaccurately, but convictions are hard to obtain. It also specifically provides that margarine and margarine cheese must be labelled as such. The Regulations concerning the use of preservatives in food make the labelling of certain articles containing them compulsory.

The Inadequacy of the Law

The position is that much of the food that is offered for sale in Great Britain is of low nutritive value and the extravagant nature of many advertisements (and particularly those for "health foods") tempt the ignorant sections of the community into purchasing and eating food which, if not actually harmful, is almost completely lacking in nourishing constituents. Numerous examples might be cited of well-known foods and beverages advertised as possessing outstanding health-giving qualities which are in reality mere stimulants. Recently, owing to the increasing public knowledge of the importance of vitamins, food manufacturers, partly in response to public demand, have taken to advertising foods as "rich in vitamins" and others to increasing the vitamin content of food by artificial means. As the Health Organisation of the League of Nations have pointed out this should be controlled, and they have established "units" for expressing the vitamin content which they consider should be used in advertising and labelling these foods.

The efforts of sampling officers and of public analysts to try and prevent the adulteration of food are admirable, but where no legal food standard exists and the matter is brought into court, it is often "trade custom" which decides the issue, in which case the prosecution is almost inevitably at a disadvantage. Also as the Sale of Food and Drugs Act is administered locally, it may happen that what passes as a "fair standard" in one place, is condemned in another. Further some of the legal food standards were laid down over a hundred years ago and can hardly be considered adequate to-day. Although the Society of Public Analysts have "recognised standards" for a large number of foodstuffs, it is not certain that even these will always be accepted in Court.

The Recommendations of the Departmental Committee on the Composition and Description of Food

The Departmental Committee on the Composition and Description of Food which was set up by the Ministry of Health to investigate this whole problem reported in 1934. Its most important conclusion was that "the law relating to the composition and description of articles of food should be altered so as to enable definitions or standards to be prescribed, or declarations of composition to be required, for articles of food other than liquid milk," but that the "case for the extension of standards or definitions to all articles of food is not made out." They also drew particular attention to the necessity of a declaration of contents being made on the label of all foods specially offered for infants and invalids. The Committee considered both the advantages and the objections of statutory definitions for articles of food, and pointed out that where no legal standard exists, the whole character of an article was often changed, while its name remained unaltered. Toffee and lemon cheese were the particular examples quoted in this connection, but the same is clearly true of a large number of foods. One of the objections to increasing the number of statutory definitions appeared to be that it might "prevent reasonable development and improvement in the manufacture of an article," but this could be avoided, in the opinion of the Committee, if the power to fix definitions were used with discretion.

The main thing to be aimed at is, as the Committee pointed out, that people when buying any important article of food should know what they are getting, both for the protection of the pocket of the consumer and in the interests of his health. It was concluded, however, that the scope of useful regulations must be limited by two considerations. First, that it is impossible to standardise flavour and general quality, and secondly, that with regard to some commodities, the purchaser should be capable of judging for himself the nature of the article he is buying.

The necessary procedure for settling standards was also considered by the Committee. The Society of Public Analysts, who gave a full statement of their views, visualised the fixing of standards or definitions for everything on the market in the way of food or drink and therefore recommended the setting up of a permanent body that should have no other duties. The Committee, however, considered that the task could be undertaken by the Foods Department of the Ministry of Health, which is well equipped with expert knowledge in regard to foods and with its own laboratories, the main object of which is the protection of the consumer. The power to fix standards and definitions should be exercised by means of an Order, a draft of the Order should be published and sufficient time should be allowed for persons interested to state their objections. Consultations between the Minister of Health, his experts and manufacturers and other interested persons could take place, for this was found a most satisfactory procedure in the case of the Public Health (Preservatives, etc. in Food) Regulations.

With regard to advertisements, the Food Manufacturers' Federation, Patent and Proprietary Foods Section, made recommendations which the Committee stated they were prepared to accept in principle. They maintained that "specific claims made in advertisements shall be deemed to be part of the package label" and that unless this is enacted "any attempt to control by Statute statements about the composition of food will be stultified."

Conclusion

From the above analysis of the legislation and administration of the law governing the preservation of the cleanliness, safety and purity of the food supply it is apparent that substantial improvements are required. They are particularly necessary at the moment in order to secure adequate standards of nutrition. We have suggested lines along which advances could be made. We have not, however, gone into these in greater detail since the P E P Consumer Research Group is concerned with exploring the various possibilities of securing to the consumer proper safeguards both in the purchase of food and of other articles.

CONTROL OF THE TRADE IN MEDICINES

Closely related to the problem of protecting the consumer against adulterated or dangerous food is the problem of seeing that the medicines, ointments, medical appliances and the like which he buys are of good quality and will not do him harm. Poisons are obviously in a particular category and are dealt with under special legislation.

The Report from the Select Committee on Patent Medicines which was ordered to be printed by the House of Commons on the ominous date of August 4, 1914, stated: "After careful consideration of the evidence laid before them your Committee find:

"(1) That there is a large and increasing sale in this country of patent and proprietary remedies and appliances and of medicated wines.

"(2) That these remedies are of widely differing characters, comprising (*a*) genuine scientific preparations; (*b*) unobjectionable remedies for simple ailments; and (*c*) many secret remedies making grossly exaggerated claims of efficacy; causing injury by leading sick persons to delay in securing medical treatment; containing in disguise large proportions of alcohol; sold for improper purposes; professing to cure diseases incurable by medication; or essentially and deliberately fraudulent.

"(3) That this last-mentioned class (*c*) of remedies contains none which spring from therapeutical or medical knowledge, but that they are put upon the market by ignorant persons, and in many cases by cunning swindlers who exploit for their own profit the apparently invincible credulity of the public."

To what extent has the position changed since then? Popular education has spread sufficiently to lessen the appeal of some of the more preposterous types of offers to treat serious diseases by magic remedies. Since the pre-war exposures the chief national newspapers and the more reputable manufacturers of proprietary medicines have agreed, through their associations, so far as possible to check by joint action the offer for sale of proprietary medicines for the prevention, cure, or relief of certain specified diseases such as cancer, consumption, and epilepsy. A very large trade has developed in branded and nationally advertised beverages, stimulants, laxatives, and home medicines, most of which probably fall within the Select Committee's group of "unobjectionable remedies for simple ailments," although it is hard to accept as "unobjectionable" the inflated prices at which some of these are sold in relation to the cost of their ingredients and the exaggerated advertising claims which are made for them. Much work has been done in developing the "genuine scientific preparations," and a great deal of benefit has resulted from the discoveries, made often in laboratories of commercial undertakings, of new drugs and medicines produced under scientific conditions and to be used wholly or mainly under the direction of a doctor. It would be unfair in any discussion of the subject to overlook the immense contribution which the leading manufacturing chemists have made to public health through the provision of "ethical products."

It is in the public interest that there should be on the market an ample range of medicines, drugs, simple remedies, stimulants and so forth for use in the appropriate conditions. It is also desirable, in many cases, that these should be standardised and advertised. This is, however, a field where a sense of responsibility and self-restraint are peculiarly necessary, and in its partial absence there is a strong case for public supervision. Where it is certain that self-medication for deep-rooted troubles cannot be other than mischievous, irresponsible manufacturers and advertisers should not be permitted to exploit public credulity by spreading the contrary belief in their own interest. Where a simple remedy or drug can be mass-produced under laboratory control in one or two forms suitable for a wide range of purposes, it cannot be in the consumer's interest that it should be marketed under a bewildering variety of trade names, with the aid of rival advertising and sales campaigns making claims which often cannot be substantiated and adding to the costs which the consumer has to bear.

In many other countries the trade in medicines is closely controlled, but in Great Britain the words of the Select Committee still hold good:

"For all practical purposes British law is powerless to prevent any person from procuring any drug or making any mixture whether potent or without any therapeutical activity whatever (so long as it does not contain a scheduled poison) and advertising it in any decent terms as a cure for any disease or ailment, recommending it by bogus testimonials and the invented opinions and facsimile signatures of fictitious physicians and selling it under any name he chooses, on the payment of a small stamp duty, for any price he can persuade a credulous public to pay."

The term "patent medicine" is confusing, although generally used. For under Section 38 of the Patents Act it is impossible to patent a medicine as such, although there may in some cases be patents which cover the process of making them. Proprietary medicines are often referred to as "patent medicines," but they are really a separate and much larger group of preparations. The inventor of a proprietary medicine keeps the formula to himself, chooses a good name for it and has the name registered or trade-marked; the name remains his property permanently. Perhaps the most serviceable distinction is between "pre-packed" medicines and those which are made up for the individual purchaser.

Legislative Control of the Trade in Medicines

Under the Pharmacy and Poisons Act 1933, a list of poisons is drawn up by the Poisons Board. Only persons or companies registered with the Pharmaceutical Society may sell poisons under Part I of the Poisons List. Poisons under Part II may be sold by those on the lists of the local authorities. Detailed instructions are laid down as to the method of selling poisons, and methods of labelling and stopping bottles. The privileged position of the registered pharmacists in relation to National Health Insurance and the control exercised over members of the profession in the interests of the public who wish to purchase medicines are described in Chapter VI.

The law controlling the sale and advertisement of medicines is the same except in specific cases as that for food, and suffers under the same limitations. There is no single central department concerned in the control of medicines and drugs. Local authorities have no specific authority to enforce the Merchandise Marks Act 1887, and, as has already been explained, it is difficult to control advertisements under it. Further, Section 2 of the Food and Drugs (Adulteration) Act concerning the prohibition of the sales of any article of food or any drug which is not "of the nature or not of the substance or not of the quality" demanded does not apply when "the food or drug is the subject of a patent in force and is supplied in the state required by the specification of the patent or is a proprietary medicine."

Under the Indecent Advertisements Act no indecent advertisement may be affixed to any house or building and under the Venereal Diseases Act 1917, no person other than a registered medical practitioner may treat or offer to treat venereal disease. Under the Dangerous Drugs Act 1920, certain drugs of addiction may only be in the possession of registered medical practitioners and their import or export is also only allowed under licence. The Therapeutic Substances Act 1925, regulates the manufacture, sale and importation of vaccines and other biological remedies.

Results of the Lack of Protection of the Consumer

In 1909 the B.M.A. published 'Secret Remedies' and in 1912 'More Secret Remedies' containing analyses of many popular remedies. Many examples of excessive claims made by proprietors of quack medicines were exposed, but untenable claims are frequently found in the Press to-day. Proprietary medicines sometimes change their content without any change in name or in the properties claimed for them. In some cases a potent drug may be put in or taken out solely because the legal conditions under which it could be sold have altered.

The injury to the public resulting from the uncontrolled sale of patent and proprietary medicines arises, in the first place, from the excessive prices charged. Secondly, there is the danger of a medicine being taken in a case for which it is quite unsuitable. Thirdly, there is the great danger arising negatively from the delay in seeking proper medical advice. In considering the first of these points it is possible to hold the view that the public should be able to look after its own purse. It is, however, questionable whether persons with small incomes wishing to protect or recover health ought to be exposed to the full battery of a modern publicity machine operated with the utmost skill to produce maximum profit for the manufacturer. Each shilling spent on a preparation perhaps worth 2d., or even worth minus a shilling, is a drag on the national health effort. The danger from the attempts at self medication is also often serious. In various parts of the Report we stress the need for the close supervision of families by general practitioners. But if people attempt to treat themselves it is difficult for the general practitioner to be responsible for them when they are ill, or to prevent their becoming ill.

The manufacturers and advertisers eagerly seize on every new scientific development which has held public attention and use it to their own advantage. Vitamins and hormones have been exploited in this way. Developments in psychology and radium treatment have afforded other opportunities. Often, in fact, if the substances and methods advertised are as potent as they are claimed to be it seems extremely unwise that they should be administered or handled by anyone but a registered medical practitioner. The public are hardly sufficiently aware of the fact that a "little learning is a dangerous thing."

Over £3 millions a year are spent on urging in the newspapers the merits of proprietary medicines and health foods. In addition the firms concerned spend lavishly upon display and publicity for retailers, free samples for members of the professions affected, radio advertising from Luxembourg and other stations and so forth. The total effect is to lead the general public and even the medical profession to favour and use proprietary health preparations to an extent far in excess of their real value and importance. Over-prescribing, reliance on palliatives and neglect of fundamental health needs are a natural result.

The Taxation of Medicines

Since 1783 there has been a tax on all persons selling medicines who are "not regularly bred to the profession of doctors, apothecaries, etc." and also there has been a tax on medicines themselves. The present law is based on the Medicines Stamp Act of 1812. There is a tax on all medicines with two classes of exemptions. The exempted drugs are, firstly, drugs sold without the addition of any other drug and, secondly, "known, admitted and approved remedies." The scale of duties varies from 3d. on an article under 1s. to £2 on an article over 50s.

These enactments are not satisfactory and have been the subject of a Select Committee which issued a Report in February 1937. The scale of duties is at present constructed so that the rate of duty which has to be paid on an article varies arbitrarily at different prices. Also various judicial decisions have resulted in several curious anomalies. For example, only preparations to be used as medicines are liable to pay duty. But there are many preparations which, though not strictly medicines, are advertised to cure or prevent certain ailments. Among such preparations are the beverages and cereals widely advertised in the newspapers. A further strange anomaly is that a preparation may be duty free if it is advertised to be used for an organ of or part of the human body, but if a specific ailment is mentioned it becomes dutiable, e.g. backache and kidney pills are liable, back and kidney pills are not.

Many well-known "single" or (unmixed) drugs are sold under fancy names, in packages which recommend the preparation for certain ailments. Such medicines, although repacked and renamed, remain exempt from duty because they are "known, admitted and approved remedies." The best examples of this practice are the many brands of aspirin. At present qualified chemists may sell, duty free, all remedies "known, admitted and approved," so long as no proprietary rights are claimed. The ordinary trader must sell the same preparation stamped, even although he holds an excise licence. The Select Committee on Medicine Stamp Duties (1937) felt that this privileged position of the qualified pharmacist should no longer be allowed, since it is at least open to doubt whether the presence of a qualified pharmacist on premises where ready-packed medicines are sold is any real safeguard to the public.

Some surprising figures as to the yield of the Medicine Stamp Duty are revealed by the Select Committee of 1937. The yield has fallen from £1,295,139 in 1925 to £747,930 in 1935. "This decrease was attributed very largely to the knowledge acquired by manufacturers and chemists of legal methods in securing exemption." The Committee estimated that the annual retail turnover of the proprietary medicine trade must reach the figure of £20 millions per annum, which, if the Committee's recommendations for tightening up the law were carried out, should yield approximately £3,300,000 in excise duty.

Recommendations

The recommendations made by the Select Committee of 1914 for altering the law relating to the sale and manufacture of patent and proprietary medicines included the co-ordination of all matters connected with the sale and advertisement of patent and proprietary medicines under one department of State. Also they recommended that a copy of the formula of all patent and proprietary medicines be given to this department. A special court should be set up with power to permit or prohibit the sale of any patent and proprietary medicine. All such medicines should have a registration number. The Committee made further detailed recommendations of which the most important was that it should be a breach of the law to give a description of a patent or proprietary medicine "which is false or misleading in any particular." It was further proposed that the sale or advertisement of cures for eleven listed diseases (e.g. cancer, tuberculosis) be prohibited. In 1920 a comprehensive Bill was introduced into Parliament to carry out the recommendations of the 1914 Report; however, the Bill failed to become law. Other Bills were introduced in 1920, 1931 and again in 1936. The 1936 Medical and Surgical Appliances (Advertisement) Bill was the result of a number of conferences held by the Parliamentary Committee on Food and Health in collaboration with the B.M.A., the Proprietary Association of Great Britain, the Association of Wholesale Druggists and Manufacturers of Medicinal Preparations and representatives of advertising and Press interests. It proposed to prohibit the advertising of medicines claimed to be effective in relation to certain serious ailments and the publication of invitations to diagnose or treat certain ailments by correspondence. The Bill, however, came up for second reading on the day of the Grand National and was talked out.

THE CONTROL OF INFECTIOUS DISEASES

The increasing knowledge of bacteriology and of the causes of illness led to the adoption in the nineteenth century of special measures to combat infectious diseases. The creation of the sanitary services and the provision of an adequate water supply, already described, checked the spread of those diseases due primarily to environmental causes. Isolation hospitals and notification have helped to limit others. The creation of port sanitary authorities has helped to prevent infection entering the country, and a further check has been secured by the building up of an international service to control infectious diseases.

International Services

In 1907 the International Health Office in Paris, under a permanent committee, was created to transmit to member governments information about infectious diseases such as typhus, cholera, plague, yellow fever and smallpox. Measures of this nature are especially important in controlling the spread of these diseases from the East. The Health Officer became the administrative office for the carrying out of the Sanitary Convention 1912. The 1912 Convention has been superseded by that of 1926. This lays down measures to be observed, by the governments of countries who are parties to the Convention, for the control of the above-mentioned diseases and for notification and subsequent communications to other countries, and to the International Health Office, of outbreaks of these diseases. The measures prescribed include the medical inspection, disinfection and freeing from rats of ships at ports, the disinfection of infected articles and the delousing of persons. Some of these matters and those relating to aerial navigation are administered by the permanent Quarantine Commission of the organisation. The Committee has inquired also into the working of the Brussels Agreement of 1924 for the provision of free treatment of merchant seamen for venereal diseases. It also appoints an advisory council to collaborate with the Health Committee of the League of Nations.

The Health Organisation of the League was constituted to give effect to Article 23 of the Covenant of the League. It consists of (*a*) a Health Committee of 12 members including representatives of the principal national health administrations; (*b*) a General Advisory Health Council which consists of the Permanent Committee of the Paris Office, to which are invited States Members of the League not participating in the Paris Office; (*c*) a Health Secretariat which is part of the General Secretariat of the League. The organisation co-ordinates the work of numerous commissions dealing, from an international point of view, with health problems such as cancer, standards of therapeutic substances, nutrition, malaria, maternity and child welfare and the treatment of syphilis. Within the Health Organisation is an Epidemiological Intelligence Service which has a branch office at Singapore.

Port Health Authorities

Port sanitary authorities (since October 1937, they have become in England and Wales, port health authorities) were created to carry out the various duties connected with the prevention of the importation of infectious diseases and the maintenance of healthy conditions in port sanitary districts. The landing of aliens is confined to certain scheduled ports and in these ports there is an organisation for the medical inspection of aliens. The Minister may constitute a port health district consisting of the whole or any part of a "port" (a port means a port established for the purposes of the enactments relating to the Customs) and constitute one riparian authority, the Port Health Authority or constitute a joint board consisting of representatives of two or more riparian authorities to be the port health authority. Further, he may create a port health district consisting of any two or more areas being ports or parts of ports, and a joint board consisting of representatives of two or more riparian authorities. The Mayor Commonalty and citizens of the City of London are the port health authority for the Port of London. An example of a joint body is the Falmouth and Truro Joint Board. In the case of London, Liverpool and some other authorities, the limits of jurisdiction of the port sanitary authority extend far beyond the boundaries of the ordinary local government area. There are 24 port health authorities in England and Wales which are not councils of boroughs or districts.

Their work consists primarily in the detection, prevention and control of the spread of infectious diseases. Thus all ships entering the jurisdiction of the London Authority are boarded by a medical officer at Gravesend. Some authorities have a special isolation hospital for the accommodation of patients suffering from infectious diseases. If the port is scheduled under the Aliens Order 1920, medical officers have to ascertain whether aliens are in proper physical condition to enter the country. Part of the duty of port health authorities consists of measures for the destruction of rats within their districts. Ratcatchers are sometimes employed for this purpose. Another important duty of these authorities is to inspect all imported food and to order its destruction if it is unfit for human consumption.

Under the Public Health Act 1936, which came into force on October 1, 1937, the sanitary administration of airports is being built up in England and Wales. Similar measures are being taken in Scotland. County councils and county borough councils, and the corresponding authorities in Scotland, are being made primarily responsible, and they will receive a special grant to enable them to perform these functions.

Notification and Control of Infectious Diseases

In the course of the nineteenth century, systems were introduced for the notification of some infectious diseases to the medical authorities. At first they were generally voluntary but, after the passage of the Infectious Disease (Notification) Act 1889, which applied to the whole of Great Britain, notification of some diseases became compulsory. Subsequent legislation, the issue of regulations by the central departments and the action of local authorities has brought other diseases within the scope of this Act. The authorities to whom notification of these diseases must be made are county district * and county borough councils, metropolitan borough councils and port health authorities in England and Wales. In Scotland the county councils and the councils of the larger burghs are the responsible authorities.

Among the diseases generally notifiable are typhoid fever, smallpox, cholera, diphtheria, scarlet fever, dysentery, malaria, tuberculosis, anthrax, hydrophobia, chickenpox and whooping-cough. Their incidence is studied in Chapter XV. Certain other diseases are notifiable in a restricted number of districts under local Acts or under regulations of the Minister of Health. The local authorities are responsible for seeing that measures are taken to prevent the spread of infection and for inspecting premises where infectious diseases are suspected. They are also responsible for the protection of the food and milk supply against infection. Partly for the purpose of combating infectious diseases, local authorities possess powers to cleanse filthy or verminous premises and to cleanse any verminous persons or their clothing. Cleansing stations are sometimes provided for the latter purpose. The powers exercised by local authorities over common lodging houses and canal boats are also part of the means of preventing the spread of infectious diseases. Moreover, it is an offence for a person suffering from a notifiable disease to travel in a public vehicle. The law also makes other provision for the protection of the public from infection. For instance, a Justice of the Peace may order a person suffering from a notifiable disease to be removed to hospital if he thinks that proper precautions are not being taken to prevent the spread of infection.

The provisions for the prevention and treatment of infectious diseases overlap in many cases with other health services. Thus, the tuberculosis service is administered under separate legislation but by some of the same administrative officers. This is also true of puerperal fever, except that it comes within the purview of the maternity and child welfare committee of a local authority and not under the health committee. The improvement of housing and the provision of other amenities of course affect the incidence of infectious diseases and are dealt with under various legislative enactments and administrative arrangements.

An account of the provision of infectious diseases hospitals is given in Chapter VIII. There are also special measures to deal with particularly virulent diseases. The authorities

---

*County Councils in the case of tuberculosis and Maternity and Child Welfare authorities in the case of ophthalmia neonatorum and puerperal fever.

responsible for notification may provide, with the sanction of the Minister of Health, an immunisation service against diphtheria and scarlet fever. About one half of the metropolitan and county boroughs are providing this service, but in country districts and in Scotland many authorities have not provided immunisation services. The Report of the Committee on the Scottish Health Services stated that medical opinion was divided as to the effectiveness of immunisation if it was applied to the population generally. Therefore they recommended further research and experiment by the local authorities. Experiments on a far more extensive scale than have been conducted in this country have in the U.S.A. proved the value of immunisation, and it is possible that the Committee on the Scottish Health Services was unduly cautious.

Vaccination

In 1867 the vaccination of children was made compulsory, and it was not until 1898 that legislation was passed which enabled a parent or other person having the custody of a child to make a statutory declaration of conscientious objection to the vaccination of the child. The procedure by which a statutory declaration could be made was somewhat onerous, but the procedure was considerably simplified by the Vaccination Act of 1907. Up to that date the greater part of the population was vaccinated, but subsequently the proportion of vaccinations to births declined considerably, and in 1935 only 35.4 per cent of the children born in England and Wales and 43 per cent of those born in Scotland were vaccinated. The best medical opinion still regards vaccination and revaccination as necessary for the complete control of smallpox. Nevertheless, few important outbreaks of smallpox occur, and the machinery for meeting and preventing the spread of a serious outbreak is ready. The vaccination service, until 1930, was in the hands of the poor law authorities, but it is now in the hands of the county councils and county borough councils, and of the corresponding authorities in Scotland.

Conclusion

The infectious disease service is obviously a vital part of the health services and it appears to be reasonably efficient. Yet improvements could be made. The Report of the Committee on the Scottish Health Services particularly advocated increased attention to research and legislative provision for the control of the known carriers of an infectious disease. The Committee also advocated the granting of wider powers to local authorities, since it maintained that at the moment the infectious diseases service was dominated by the idea of isolation, whereas the service could be improved if it were oriented more directly towards providing treatment such as home nursing and home medical supervision for the simpler diseases of childhood. This would also enable the hospital accommodation to be used in the best possible way and ease the congestion in the hospitals.

III. INDUSTRIAL HEALTH

Introduction—Hours of Work—Environmental Conditions—Accidents—Occupational Diseases—The Examining Surgeon—Central Administration—Local Administration—The Administrative System considered critically—Industrial Medical Officers—The Place of the Industrial Doctor in the Industrial Health Services—Medical Examinations—Education in Industrial Health Problems.

Introduction

The methods by which the State improves the environmental conditions under which its citizens live have been described in the preceding chapter. But the State has not only had to lay down minimum standards for the sanitation, housing conditions and water supply of its citizens in the interest of their health; it has also had to draw up standards controlling the working conditions of these same citizens. While Chadwick and the early pioneers in public health were creating a sanitary code, Shaftesbury and his associates were laying the foundations of Britain's code of industrial legislation. Nevertheless, the close connection between industrial conditions and health was not appreciated in the nineteenth century, and the early Factory Acts were passed, broadly speaking, on humanitarian grounds. While the economic doctrine that the last hour of work produced profits held the field, little attention was paid to the argument that reduced hours might lead to less ill-health and to more efficient labour. Only gradually did factory legislation and its administration become concerned with health problems. Thus, in 1883, an Act was passed to put the white lead industry under special regulations, since white lead was poisoning workers, and in 1898 the office of Medical Inspector of Factories was created.

Nowadays it is recognised that any man or woman engaged in certain occupations is liable to be exposed to peculiar hazards from disease or accident. Some of these hazards arise from unsatisfactory conditions, such as long hours or poor lighting of the factory; others are due to the nature of the process, which may expose a person to exceptional risk from accidents or from disease. Absences through such accidents or illness dislocate industry and cost large sums of money under the Workmen's Compensation Acts. They also deprive the workmen of their wages and thus dislocate their households. Sixteen industries and occupations making returns to the Home Office in 1935, accounting for about a third of the United Kingdom's occupied population, had a total of 406,241 compensable accidents (of which 2,623 were fatal), and also gave rise to some 19,000 cases of compensable industrial diseases. In 1936 there were 176,390 reported accidents in factories and workshops in Great Britain, entailing death or absence from work for three days or more. It was estimated by the Home Office that during 1935 industry spent a little less than £12,000,000 in providing for its liabilities under the Workmen's Compensation Acts. Any attempt to assess the burden of ill-health on industry would also have to allow for the losses from labour turnover due to unhealthy conditions and from inefficiency, due to the same cause, among those at work.

It is impossible to estimate what proportion of the total sickness of any section of the population is due wholly or partly to industrial conditions. But it is known that such conditions play a considerable part in causing or alleviating sickness. It is estimated that the total number of working weeks lost annually by employees for which National Health Insurance sickness benefit is paid is over 30 millions in Great Britain, equivalent to the entire year's work of some 600,000 persons, or an average annual absence of ten days for men and twelve for women. These figures do not cover those absences of three days or less for which sickness benefit is not paid, nor is allowance made in them for lost time due to accidents for which compensation is payable. They cover, however, not only industrial workers, but commercial, domestic, and other employees, and they include categories of sickness which are not in any way due to industrial conditions.

P E P, in its scheme for an inquiry into all the aspects of an employment policy, has already dealt, in the Report on the British Social Services, with the provision for social security made by the State. One aspect of social security is reviewed in this Report on the Health Services. In the Entrance to and Exit from Industry Reports, P E P examined the possibility of extending educational provision to those under 18, while facilitating their entrance to industry on a part-time basis, and of creating a system of retirement pensions. In a current investigation, the Partners in Industry Inquiry, we are examining the relations between labour and capital involved in co-partnership schemes and other schemes of industrial co-operation. Further inquiries into particular aspects of the problems connected with employment will be set on foot in the near future. Consequently, in this Report, it is only necessary to give a summary of the legislation governing industrial and other working conditions and a summary reference to the additional "welfare" measures which are either desirable or in force. Yet from a purely health point of view, measures such as the reduction of hours, the increase in security of tenure of employment and the provision of pensions, may have a very vital significance. Adequate playing fields and the provision of cheap and nutritious meals, if properly used, ought to improve the health of the workers. Therefore they cannot be ignored in a picture of the health services of the country, and consequently this chapter contains numerous references to all these points. More space in it is, however, given to the provision and organisation of medical services in connection with industrial work, such as the development of the service of industrial medical officers. This subject rightly belongs to a report on the health services, but it is well to bear in mind that there is no evidence that the provision of these services helps to improve the health of the worker more than the shortening of hours or the raising of wages.

Before proceeding to an account of some of the legislation governing the conditions of employment, it is necessary to point out that a large part of this legislation has recently been revised and consolidated in the Factories Act 1937, which received the Royal Assent on July 30, 1937. It represents a substantial, if overdue and cautious, advance in industrial legislation. It will supersede the Factory and Workshop Act 1901, the Police Factories, etc. (Miscellaneous Provisions) Act 1916, and other measures. It applies, broadly speaking to premises in which persons are employed for the purpose of making or adapting any article by way of trade, to shipyards, docks, printing presses, laundries, builders' yards, locomotive repair sheds and construction work, but it does not apply to mines. It will probably affect directly the working conditions of about seven million people.

With minor exceptions it does not come into force until July 1938. But this chapter will refer to its provisions in preference to those which are about to be superseded.

Hours of Work

It is generally agreed that the length of hours worked by many people affects their health adversely. Only in four industries—coal-mining, railway transport, road transport, and in certain sections of the pottery industry—are there any legal restrictions on the hours of work of men. In the case of transport, work schedules are laid down; and coal-miners, except a limited number of safety men whose limit is 8½ hours, are prohibited from being below ground for more than 7½ hours a day except in the event of an emergency. Under the Shops Act 1912, although actual maximum hours of work are not prescribed, a statutory half-holiday, statutory intervals for meals, and closing orders, substantially limit the hours of adult shop assistants. Owing to the absence of legislation of this kind for industry as a whole, a considerable number of males over 18 are working at the present time in factories, for example in the Midlands, for between sixty-eight and seventy-two hours a week, exclusive of meal times. Clearly such conditions are not favourable to the introduction of schemes for physical recreation and to the improvement of fitness.

Under the Factories Act 1937, the normal limit of working hours for women and young persons (persons under 18) becomes 48 hours a week. There is a daily limit of 9 working hours and a maximum "period of employment" (which includes intervals for meals and rests) of 11 hours. Work is prohibited after 1 p.m. on Saturdays, and for young persons under 16, after 6 p.m. on any ordinary day. Moreover, work for all young persons and women may not begin until 7 a.m. and must end at latest by 8 p.m. (9 p.m. for females over 18 working overtime). Employment beyond 48 hours a week is not to be permitted for young persons under 16, but overtime employment (in effect, work for more than 48 hours a week) is to be permitted for women and young persons over 16 up to 100 hours in any calendar year. For women only, the 100 hours may be increased by regulation to 150 in industries liable to seasonal and other special pressure. Overtime may not exceed 6 hours in any week and may not take place in more than 25 weeks in any year. It must generally be calculated by reference to a factory or a department of a factory and not to individual workers, but the Home Secretary may in certain circumstances permit it to be calculated by reference to an individual, in which case no woman may work more than 75 hours overtime and no young person more than 50 hours in any year. The Home Secretary may also reduce the overtime allowed in any industry if after an inquiry he is satisfied it can be done without serious detriment to the industry. There are special exceptions modifying these provisions for laundries, iron and steel manufacture, milk and cheese factories, and five-day week factories. After July 1, 1939, the weekly hours to be worked by young persons under 16 are to be reduced to 44, but the Home Secretary has power to increase the hours to 48 if an industry can show that it would be seriously prejudiced if it were deprived of the labour, that up to 48 hours in one week would not be likely to be injurious to the health of the young people, and that their occupation is particularly suitable for them and likely to lead to permanent employment.

It is illegal for any woman or girl to be employed below ground in any coal mine or metalliferous mine. In collieries, boys and girls under 16 may not be employed above ground for more than 54 hours in one week or 10 hours in one day. No work may be done on Sunday or on Saturday after 2 p.m. The Shops Act 1934 prohibits the employment of any young person in or about a shop for more than 48 working hours and allows only fifty hours of overtime to each individual over 16. Modifications are made for special trades. Apart from this Act and the Shops Act 1912, there is no special legislation restricting the work of women and young persons in shops. There is no special legislation regulating hours of work in offices, agricultural work, domestic service and work in cinemas, except under the general Acts, of which the principal are the Children and Young Persons Act 1933 and the Employment of Women, Young Persons and Children Act 1920, relating to the employment of women, children and young persons. Night work for women and young persons is forbidden in any industrial undertaking. No child under 14 is permitted to work in any factory, workshop, mine or works of construction, or on work connected with the transport of passengers. No child under the age of 12 may be employed on any work for more than two hours on any day on which he must attend school. A local authority may modify by by-law the rules relating to children under 12.

The Departmental Committee on the Hours of Employment of Young Persons in certain unregulated occupations found that van boys, page boys, lift boys, attendants in hotels and places of public entertainment worked unduly long hours. Often, also, in other unregulated occupations, boys worked late at night and had a long spread over of hours, although they may have spells off work in the middle of the day. The committee were impressed with the need for control, and as a result of their recommendations it was made possible to apply the Factories Act 1937 to some of the young persons in these categories, but the hours and conditions of work of many others remain unregulated and, in some cases, disgracefully long.

Under the existing law, as a result of the pressure on some industries, owing to boom conditions and the rearmament programme, many women and young persons just over 14 are within the factory walls for twelve hours a day, and eight hours on Saturdays. Here they are probably doing repetitive and dull work. Moreover, where scientific methods of timing each operation are injudiciously applied, there is evidence to show that they are enduring a strain which becomes unbearable and leads to an increase in sickness absence. Very many of these mothers and future mothers in London and in the larger centres of population take fifty minutes or more to get to their work and back from it. The remaining ten hours or ten and a half hours of the twenty-four are their own to sleep, eat and play in, if they can steal time from their necessary domestic duties.

In the light of these conditions the vigour with which amendments such as the prohibition of work before 7 a.m. were pressed on the Government in the committee stage of the Factories Bill can be understood. Even the new law will often only reduce the time spent in a factory by one hour on ordinary days, and, of course, this will not occur if overtime is being worked. Besides these legal long hours, ugly cases of illegal hours being worked are mentioned in the Annual Report of the Chief Inspector of Factories for 1936. For instance, at a bakery two women worked seven days a week with a certain amount of illegal overtime from the beginning of June to the middle of August. On prosecution the total penalty inflicted was £1 with £1 7s. 6d. costs. In a laundry 30 women and girls worked for two consecutive Sundays so that they had an unbroken period of 20 days work.

On prosecution the fine imposed totalled £4 10s. 0d. It is obvious that in these and many of the other cases quoted the fines would not act as a deterrent. Moreover, in some trades such as laundrying and the developing of amateur films in seaside towns the financial incentive to commit illegal acts of this kind is undoubtedly exceedingly strong.

Some firms and some industries have agreements limiting hours of workers. Thus an agreement between the employers and operatives in the boot and shoe trade has given that industry a 46-hour week. A similar agreement in the printing trade has reduced hours to 45 a week. Five-day weeks are becoming increasingly frequent: for example, the Chief Inspector's Report says, "In some of the new factory areas on the outskirts of London it is, in fact, now quite common."

Environmental Conditions

In response to the demands of humanitarians, legislation was introduced to control the environmental conditions in factories. But even under existing legislation these minimum standards are sometimes deplorably low. As a result, however, of the recognition of the connection between environmental conditions and good health, accompanied by the study of how conditions can be improved, the minimum standards in the Factories Act 1937 have been raised. Thus, after five years, or under some circumstances ten years, in any existing factory and (once the Act is in force) in any new factory, the minimum amount of cubic space per worker is fixed at 400 cubic feet (any space more than 14 feet from the floor is not counted in this calculation). There are provisions regulating the temperature, lighting and sanitary needs of a factory, but no definite standards are fixed. However, after the first hour of work in every workroom in which a substantial proportion of the work is done sitting and does not involve strenuous physical effort, a temperature of less than 60 degrees will not be deemed reasonable. The Secretary of State also has power to fix standards in any factories where he considers them necessary, and it is to be hoped that he will utilise these powers liberally and in accordance with the best industrial practices and the findings of the Industrial Health Research Board and other research institutions. An underground room may not be used as a factory if it is certified to be unsuitable for that purpose by an inspector. The use of any new underground rooms has to be notified to the inspector, and if the room is to be used for any prescribed process of a hot, wet or dry nature, or liable to give off fumes, the consent of the inspector for the use of the room must be obtained. Control over the type of structure and the situation of new factories, which are often the chief causes of bad conditions, is exercised by the local authorities under the general Acts relating to public health, and it is more stringent in England and Wales than in Scotland. Undoubtedly, more attention should be paid in this work to improving environmental conditions and to the enforcement of existing legislation.

The control of environmental conditions in coal mines is generally only incidental to securing the safety of the miners and not exercised with a view to securing them healthy or more tolerable conditions of work. General regulations concerning ventilation, temperature and lighting are made applicable to shops under the Shops Act 1934. Environmental conditions in offices are not regulated except under the provisions of the

Public Health Acts which enable local authorities to insist on the provision of sanitary facilities in them.

Under the Factories Act 1937 it will become obligatory for employers to provide drinking water and, except where the Secretary of State allows exemption, washing facilities, where practicable, and accommodation for the clothing of their employees which is not worn during working hours and for drying it if it is wet. It is also laid down that suitable facilities for sitting shall be provided to enable female workers whose work is done standing, to take advantage of an opportunity to rest, whenever this occurs. If a process is employed in a factory which gives rise to siliceous dust or asbestos dust, or in which lead, arsenic or other poisonous substance is so used as to give rise to any dust or fume, suitable provision for allowing employees to take their meals elsewhere must be provided; and the Secretary of State may make regulations to enforce this in other cases when any process may cause injury to health or make it undesirable to take meals in the workroom. The Coal Mines Act 1911 makes provision for the making of regulations concerning sanitary arrangements both above and below ground for mines. Under the Act provisions for pit-head baths and facilities for drying clothes need only be made if the workers pay half the cost of their maintenance. Actually most baths and facilities for drying clothes are now provided out of the resources of the Miners' Welfare Fund and maintained by the subscriptions of the employers and the employees. The fund was, until 1934, obtained by a levy of 1d. per ton of coal raised, but now the levy is ½d. The fund, since 1926, has been augmented by a levy on royalties. Under the Shops Act 1934 suitable and sufficient washing facilities must be provided unless exemption is secured. Moreover, where persons employed in a shop take their meals there, arrangements for this must be made. Under the Shops Act 1912 seats behind the counter or elsewhere must be provided if female workers are employed.

Progressive firms have made a study of environmental conditions and taken measures for improving them, but unfortunately, these firms employ a very small percentage of all workers. Such measures include the provision of canteens in factories. This is a great boon, especially if the factory is situated somewhere where it is unprofitable to open a public cafe. Under various schemes, milk is sold to the employees, and it is estimated that over 600,000 gallons monthly are consumed in this way. This provides nutrition during rest pauses, which are being introduced, above the legislative minimum, to improve working conditions. The monotony is further relieved in the factories of some firms by broadcasting light music. Large numbers of firms support sports clubs. Of course, five-day weeks, pensions schemes, and holidays with pay are invaluable in improving labour conditions, but they are confined to a minority. In fact, all these improvements are limited in their application since, generally speaking, the smaller firms do not or cannot implement them. According to the Annual Report of the Chief Inspector of Factories for 1935, more than one-third of all factory employees work in units employing not more than 100 persons, and nearly three-quarters of all factory workers are in units employing less than 500. The Miners' Welfare Fund assists in the provision of canteens, recreation grounds and other amenities in and near collieries. Some colliery firms also provide amenities for their employees. Assistance towards the capital cost and maintenance of sports grounds and other amenities is made by the management of some shops and offices.

Bad working conditions undoubtedly tend to decrease resistance to disease. The Report of the Committee on the Scottish Health Services showed that bronchitis, pneumonia, diseases of the veins and cardiac debility, had an incidence among miners which was something like 75 per cent above that in the country as a whole. A recent investigation of the Industrial Health Research Board shows that 33 per cent of sickness absence is attributed to influenza and the common cold, 13 per cent to gastric effects, and 12 per cent to tonsillitis. Bad ventilation may cause headache and predispose to anæmia, while dust often helps to cause bronchitis. Psycho-neuroses may also be aggravated by industrial conditions. There are, for example, the well-known occupational neuroses, such as some cases of miner's nystagmus. Psycho-neurosis accounts for a considerable amount of sickness absence. Thus, Dr. Halliday, the Glasgow Regional Medical Officer, found that out of 1,000 consecutive Scottish cases kept away from work twelve weeks or more and referred to him, 33.5 per cent showed a condition which was primarily psycho-neurotic. (See Chapter XIII.)

Accidents

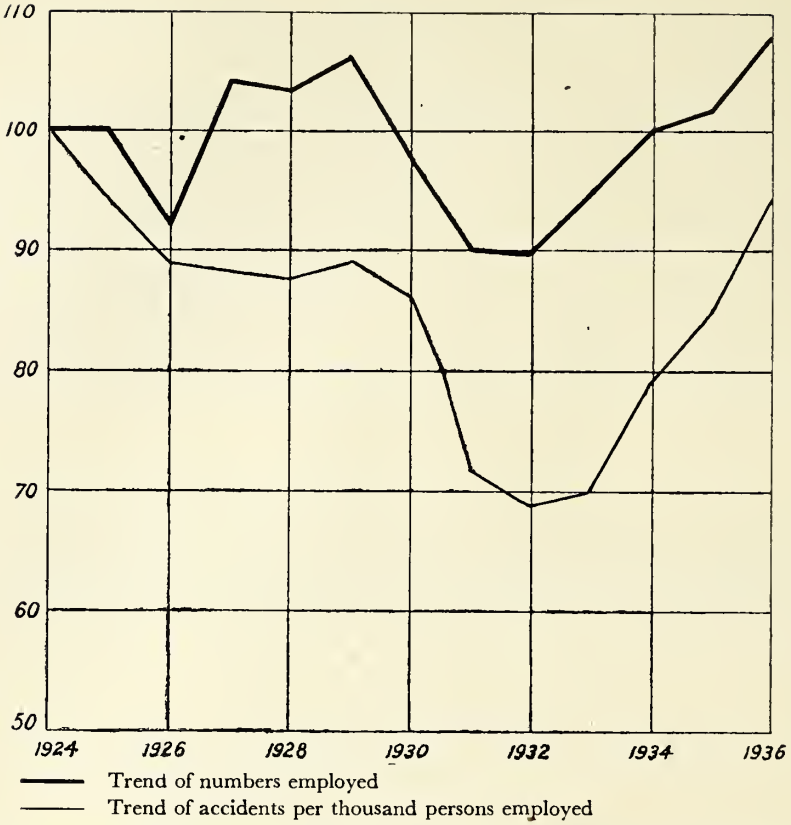
The importance of the problem of industrial accidents is suggested by the following figures, but they do not show anything like the extent of the problem since they only refer to accidents reported under the Factory and Workshop Act 1901, entailing death or absence from work for three or more days, in factories (the term 'workshop' is obsolete under the new Act).

REPORTED ACCIDENTS

	Fatal	Total
1920	1,404	138,702
1925	944	159,693
1930	899	144,758
1931	755	113,249
1932	602	106,164
1933	688	113,260
1934	785	136,858
1935	843	149,696
1936	920	176,390

These figures may be taken as an indication of the trend of the incidence of accidents. It appears that the rate of accidents per person employed varies fairly closely with the activity of trade, and in periods of slump it is comparatively low. It is rising steeply at the present, but some long run improvement may perhaps be detected. The figure on the next page shows the index numbers for employment and for accidents per 1,000 employed. The top line shows the numbers employed each year, as a percentage of the number employed in 1924, and the bottom line is the number of accidents each year per 1,000 employed, as a percentage of the number of accidents per 1,000 employed in 1924.

Figure I



As is to be expected, the rate is highest in the heavy industries; for example, in iron and steel and other metal rolling it is 11,108 per 100,000 employed, and in constructional engineering it is 9,585 per 100,000, whereas the average for all manufacturing industries is 2,642 per 100,000. (1935 figures.)

The following table shows that the rate amongst young persons under 18 is particularly high.

ACCIDENT RATES IN DIFFERENT YEARS

Accidents per 100,000 Employed

	Males		Females		All Workers	Per cent excess of accident rate among young persons over rate among adults	
	Young persons	Adults	Young persons	Adults		Males	Females
1928	4,440	3,640	1,351	869	2,779	22	55
1930	4,585	3,510	1,368	799	2,420	31	71
1933	3,720	2,930	1,320	817	2,270	27	61
1934	4,890	3,530	1,552	938	2,665	38	65
1935	4,352	3,410	1,414	972	2,642	28	45

The Chief Inspector of Factories in his Annual Report for 1936 calls special attention to this problem, and mentions several cases of deaths of boys under circumstances which should have been avoided. One flagrant case was a "Boy (aged 14) killed in shafting while attempting to replace belt of pulley. He had been told to do so."

However, it must be noted that though the accident rate is higher amongst young people, the accidents themselves appear to be less serious in character. The fatality rate amongst male workers per 100,000 employed is as follows:—

	Young persons	Adults
1928	10.8	21.5
1930	13.5	21.3
1933	10.7	18.0
1934	11.1	20.3
1935	9.5	19.3

For females the fatality rate is higher for young persons than adults, but in both groups it is very low.

In a sample inquiry of 77 factories employing 55,000 workers, it was found that in 32.2 per cent of the accidents involving boys and in 26.2 per cent of those involving girls the firms were mainly responsible. In 44.3 per cent and 51.1 per cent respectively of the accidents the young workers were themselves mainly responsible. In the remaining cases no blame was attached.

The same inquiry ascribed the high juvenile accident rate to employers taking on an inferior type of boy or girl owing to the scarcity of juvenile labour, to modifications of manufacturing processes making it possible to increase the employment of young and unskilled labour, and to inducements to speed offered by inappropriate bonus systems for increased output. It was also found that the inclination of young persons to take time off after a slight injury statistically exaggerated the accident rate. A more interesting finding was summed up in the following words in the Annual Report of the Chief Inspector of Factories and Workshops for the year 1936: "An anxious or unhappy state of mind can be a factor in the cause of accidents to the young as well as to the older worker. Two examples are girls who began to meet with slight mishaps, one after the death of a parent and the other after her family, who were in straitened circumstances, had been evicted from their house. It is satisfactory to know that many employers bear this point in mind but much more could be done in this connection through welfare work." These examples only serve to emphasise the close relationship between medical, sociological and industrial problems, and the need for efficient and sympathetic labour management on the part of employers.

A further danger in all accident cases is the development of sepsis. In 1932 and 1933 11 per cent of the persons who suffered from accidents reported under the Factory and Workshop Act 1901 developed sepsis. The effect of an efficient factory medical and nursing service upon sepsis rates is discussed on p. 84.

The Factories Act 1937 has brought up to date the legislation relating to the safety of workers. Provision is made for the proper fencing of various kinds of machinery such as prime movers, transmission and other dangerous machinery. No woman or young person is allowed to clean prime movers or transmission machinery which are in action. New requirements have been added to the old law which deals with vessels containing dangerous liquids; cranes and other lifting apparatus; safe means of access to work places; precautions with respect to explosive or inflammable dust, gas or vapour; steam receivers and steam containers; air receivers and water-sealed gas holders. The measures for securing that the means of escape from a factory in case of fire are adequate have been extended. Power is also given to an inspector, where conditions are found to be so dangerous that the factory should not be used, to apply to a court of summary jurisdiction for an order prohibiting the use of the factory. The Secretary of State is given power to prescribe dangerous machinery, on which young persons shall not be allowed to work until they have received full instructions in the dangers involved in its use and the precautions necessary in using it. A young person must also, if he is working on such a machine, until he has received sufficient training in its use, work under the supervision of someone who is thoroughly acquainted with it. The duties of the workers are set out in a provision which states that they must not interfere with or misuse any appliance for securing their health or safety and further that they shall make use of these appliances whenever they are provided. Moreover, they shall not wilfully and without reasonable cause do anything likely to endanger themselves or others. Unless an ambulance room is provided in a factory, one first-aid box must be provided for every 150 persons employed. If the Secretary of State is satisfied that in any factory or factories doing a particular kind of work there is a peculiar chance of injury, he may make special regulations requiring precautions regarding safety measures. Accidents involving death or absence from work for three days have to be reported, and the Secretary of State has power to direct an investigation into their cause and circumstances.

Many firms take measures other than those prescribed to prevent accidents or to mitigate their severity once they have occurred. Particulars of some of these involving the employment of doctors are described later in the chapter. Others include the appointment of safety committees and safety officers. The training of young workers in safety measures is quite frequent. Posters are also displayed warning employees against accidents. The National Safety First Association conducts propaganda work on the subject and organises safety weeks and conferences. The Report for 1936 of the Chief Inspector of Factories states that the memorandum on the prevention of accidents among juveniles drawn up as a result of a conference in which the National Confederation of Employers' Organisations participated was "widely distributed." But continues: "While the reports of the Inspectors show that the Memorandum has without doubt awakened considerable interest among the more progressive employers and better organised factories, dissatisfaction with general progress is nevertheless expressed. It is regrettable to have to record that many Inspectors have found that the publicity given to the matter has aroused little if any interest in many employers and that others have had no knowledge of it, though dissatisfaction on this point is perhaps not justified at this stage, since sufficient time may not have elapsed to enable employers generally to give the subject the consideration it deserves."

It is impossible here to set out in detail the elaborate arrangements made under the Coal Mines Act 1911 and other Acts for securing the safety of miners. Any person who is responsible for safety in mines must have special qualifications for his post. There are regulations concerning ventilation, supports, lighting and safety lamps. There are regulations securing the safety of shafts and a rule that every seam which is being worked must have two entrances and exits. Machinery must be fenced in much the same way as it must be in a factory. There are strict regulations governing the use of explosives in mines. Arrangements are also made for the organisation of rescue work and the provision of central rescue stations and ambulance rooms. However, the not infrequent occurrences of tragic disasters with considerable loss of life, and the setting up of the Royal Commission on Safety in Coal Mines, indicate that the miner's life is still extremely dangerous and that Parliament and the public are not convinced either that the legislation, or the administration of that legislation, are satisfactory. The Metalliferous Mines Regulation Act 1872 and the Quarries Act 1894 regulate safety in other mines and at quarries.

The relative danger of mining and factory work can be gauged by comparing the number of accidents for which Workmen's Compensation is paid, per 100,000 workers. The factories grouped as "metals (extraction, etc.)" have the highest rate of any group making returns to the Home Office.

NUMBER OF CASES IN RESPECT OF WHICH PAYMENT WAS MADE UNDER THE WORKMEN'S COMPENSATION ACT PER 100,000 EMPLOYED IN GREAT BRITAIN

	Fatal			Disablement		
	Mines	Metals (extraction, etc.)	All Factories	Mines	Metals (extraction, etc.)	All Factories
1931	116	33	14	19,800	6,920	3 010
1932	113	24	11	19,100	6,510	2,940
1933	115	24	12	18,840	6,570	2,920
1934	116	26	12	20 220	7,580	3,240
1935	160*	27	13	20,960	7,470	3,420
1936	114	—	—	21,130	—	—

* Gresford disaster.

The figures for mines relate to accidents only, but the other figures include industrial diseases. Coal mines account for about 97 per cent of all mine workers. The accident rates in other mines are not so high, but they are above those in the most dangerous factory industries.

The principal cause of accidents is, of course, falls of ground, but another factor, which accounts for nearly half as many deaths, and more than half as many injuries, is crushing by trams or tubs. The following table shows the periods of disablement caused by injuries received in 1936 in or about mines under the Coal Mines Act in Great Britain:

Number of Persons Disabled for Following Periods

No. of Persons Disabled for Following Periods		Per cent of total for which period known
3–7 days	18,787	15.0
8–14 ,,	28,099	22.5
2 and under 6 weeks	59,476	47.6
6 ,, ,, 13 ,,	14,396	11.5
13 ,, ,, 26 ,,	3,547	2.9
26 weeks or longer	599	0.5
Period unknown or not recovered at end of year	10,425	100.0
	135,329	

It will be seen that only 15 per cent of disablements lasted less than a week, while a further 15 per cent lasted over six weeks.

The Railway Employment (Prevention of Accidents) Act 1900 enables the Minister of Transport to make regulations for the protection both of the public and of the railways' employees. The rate of compensable accidents in 1935 was 56 fatal and 4,950 disablement cases per 100,000 employees, excluding clerical staff.

As in many industrial health problems, the factors involved both in the prevention of accidents and even in the measures for treating their victims, as can be seen from the previous account, are sociological and technical as well as medical. The pressure for quick work and high profits is an economic factor. The protection of complicated and dangerous machinery is an engineering problem. The working of long hours, which naturally tire the worker and make him more prone to accidents, is essentially a problem of works management. Another non-medical problem is the manner in which payments to injured workers under the Workmen's Compensation Acts are made, which is open to very serious criticism. In 1935 the total cost of Workmen's Compensation, including administrative expenses, was estimated by the Home Office to have amounted in all industries in Great Britain to a little under £12 millions. In the factory industries making returns to the Home Office averaging 5½ million workers, £2¼ million was paid in compensation, the whole, except £96,648, of which went in settlement of accident cases. Of these accident cases 692 were fatal and 190,034 disablement cases. Not unnaturally the great majority of employers insured against their liabilities under these Acts. In 1935, the detailed returns made by seven large groups of industries show that 46.2 per cent of the compensation paid was paid by Mutual Indemnity Associations, 20.3 per cent by insurance companies, and 33.5 per cent by employers.

Some of the methods insurance companies employ to induce injured men to take lump sum payments, which are often cheaper to the company than annuities, are very questionable. Also they can always command, owing to their large financial resources, the best legal and medical assistance to maintain their case in any dispute. Apart from the sums spent in this manner their management expenses tend to be high. Consequently in 1923 the Home Office induced them to agree not to allow these expenses to go above 37½ per cent of their premium income. In fact in 1935 33 per cent of their premium income was spent on commissions and expenses of management and 2½ per cent went as profits, leaving 64½ per cent for compensation payments and the expenses of legal and medical advice. This state of affairs cannot be satisfactory to the insured, whose premiums necessarily remain high. Besides these objections to the system no inducement, such as the reduction of premiums, is held out to the insured to reduce his accident rate. The Committee of the B.M.A. on Fractures stated in their report that : "It is to be inferred that measures, such as here proposed, which will very materially reduce the total incapacity periods of the insured, will not necessarily be welcome, since that must involve eventually a reduction of revenue through the lowering of premium."

In some cases the Mutual Indemnity Associations, since they are not run for profit, are more interested in encouraging the prevention of accidents and in securing treatment for injured workmen. When industrial organisations carry their own risk they often take active measures to reduce their accident rates and to secure the shortening of the duration of the disability of the injured workman by providing light alternative work.

Another result of the present system is that the energy and interest of the injured worker is diverted from trying to get well to struggling for adequate compensation. This is particularly true in cases where the worker is tempted to obtain what he considers a very large sum of money by getting a "lump sum" payment. The B.M.A. Committee thought that it was responsible for "much prolongation of disability" and often deterred a man from either desiring or seeking to recover. They summed up their conclusions in a very penetrating paragraph into the sociological aspect of the problem. "In short, it may be said that the prospects of a lump sum may induce the patient to prolong an incapacity, and that it may disturb his whole social life to the detriment of himself, his family, and the State; and the failure to receive the amount he was led to expect often leaves him embittered and disillusioned. The prevalence of unemployment aggravates the situation. This method of compensation should be reserved for permanently incapacitated workmen who have arrived at their minimum disability." The rates of payment, the maximum being 30s. per week, for workmen's compensation are often inadequate for the injured man's household and this sometimes leads to his too hasty return to work. Moreover, the provision that payment cannot be obtained until after a lapse of three days deters injured workmen who need treatment from seeking it. Owing to the dissatisfaction with the present system of insurance for Workmen's Compensation, a Departmental Committee is examining it.

The Report of the B.M.A. Committee on Fractures revealed to a wide public the success of some modern methods of treating accident cases. Briefly, it showed that, for example, in a series of consecutive cases, 1 per cent of those treated in organised clinics remained permanently incapacitated, whereas of those treated in other ways 37 per cent incurred permanent incapacity. It also showed the total inadequacy of the provision of organised clinics. As a result of these findings an Inter-Departmental Committee on the Rehabilitation of Persons Injured by Accidents was set up. In an interim report issued in

February 1937, this committee recommended the setting up of clinics in connection with hospitals in all the important centres of population. Their findings are further discussed in Chapter VIII. It is essential that a fracture service to cover not only industrial workers but also the rest of the community should be created. One of the problems of promoting an adequate fracture service mentioned by the B.M.A. Committee, which nearly concerns industry, is that of providing light alternative work, which has a definite therapeutic value. Some firms make efforts to do this, others do not; and some, owing to the nature of their organisation, cannot.

The existence of these problems in relation to accidents only illustrates once more the close connection between industrial medicine and the most fundamental sociological problems. It is essential, therefore, that they should be approached, not in any narrow departmental sense, but by men and groups of men with breadth of view and understanding of the social implications of their work.

Occupational Diseases

A worker may avoid accidents but fall victim to what are known as occupational diseases. These are diseases occurring among industrial workers which can be directly ascribed to hazards inherent in the process on which they work. Other diseases are undoubtedly aggravated by industrial conditions. A large number of the diseases in the first category come particularly under the special supervision of the Home Office Factory Medical Inspectorate under Section 13 of the Factory and Workshops Act 1901. This also requires the notification by any doctor, of certain industrial diseases, and provides for an inquiry. Similar provisions are made under the Factories Act 1937.

The following table shows that incidence of diseases under the Special Orders for Dangerous and Unhealthy Trades has been reduced.

NOTIFIED INDUSTRIAL DISEASES

	Cases			Deaths		
	1920	1930	1936	1920	1930	1936
Lead poisoning . . .	289	265	163	44	32	13
Other poisoning . . .	14	28	9	—	—	3
Anthrax	48	43	30	11	6	1
Epitheliomatous Ulceration .	45	194	142	1	36	27
Chrome Ulceration . .	126	95	84	—	—	—
TOTAL . . .	522	625	428	56	74	44

A large number of diseases which can be directly ascribed to industrial conditions are not "notifiable" diseases. Affections of the lung occur in many industries; silicosis and asbestosis are fairly well-defined types of pulmonary fibrosis, whose incidence depends upon inhalation of dust containing free silica or asbestos fibre. But other dusts may affect the lungs; the incidence of respiratory disease in cotton operatives has recently been investigated and has been related to the cotton dust in the air. Inhalation of other dusts, although it does not cause a specific respiratory disease, probably increases the incidence of bronchitis and pulmonary fibrosis amongst the workers. There are other diseases which are particular hazards in some industries. Partly in recognition of this fact, 37 diseases are scheduled for which workmen's compensation can be claimed, while there are only 12 notifiable diseases.

In 1935 compensation was paid for 3,630 cases in factory trades in Great Britain, three-quarters of which were dermatitis. In mines the incidence of compensable diseases is much higher. Payment was made for 15,266 cases in 1935, that is 1,980 per 100,000 employed, against 66 per 100,000 in factories, and 142 per 100,000 in china and earthenware factories, where the rate is highest. The number of cases compensated for the principal diseases in factories, mines and other industries in 1935 was as follows:

	Factories	Mines	Railways, docks, shipping, constructional work, quarries
Lead poisoning	245	12	6
Dermatitis	2,698	139	116
Epitheliomatous cancer	125	1	6
Subcutaneous cellulitis:			
Hand	142	1,309	38
Knee	83	4,374	11
Elbow	9	621	7
Inflammation of synovial lining of wrist joint	145	374	8
Miners' nystagmus	—	8,430	—
Others	183	6	10
TOTAL	3,630	15,266	202
Numbers employed	5,488,253	770,091	973,523
Rate per 100,000	66	1,980	21

The Examining Surgeon

Under the regulations concerning accidents and occupational diseases the certifying factory surgeon is given special powers to inquire into and report on certain accidents and diseases. He is given similar powers under the Factories Act 1937, and is designated the "examining surgeon." In accordance with existing legislation, every young person under 16 who is employed in a factory must be medically examined. This provision is made more positive in the new Act and it is stated that the examining surgeon must certify the person "to be fit for that employment." The certificate may also be issued subject to a re-examination being held. Also the local education authorities are empowered to give the examining surgeon confidential information about the medical history and record of any young person. These measures may make the medical examination of young persons, which was found by a Home Office Departmental Committee in 1924 to be in some areas "quite valueless," more effective. In 1936 there were 1,725 certifying (or appointed) factory surgeons. They are general practitioners who are selected by the Home Office and work under its supervision. They carried out 400,245 examinations of young persons under the general provisions for the inspection of young persons. Under the Merchant Shipping (International Labour Convention) Act 1924, every person under 18 going to sea must be medically examined. Despite the obvious danger of work in a mine, a boy is not required by law to be medically examined before he is employed there. Besides the possibility of endangering himself a boy who is unfit might, under some conditions, be a very serious danger to others.

Central Administration

The work of supervision over industrial health, welfare and safety under the Factories and Workshops Act of 1901, and subsequent Acts and orders, is carried out by the Factory Department of the Home Office, which controls a staff of 264 inspectors divided among eleven divisions of Great Britain. These include 8 medical inspectors, 10 electrical inspectors and 10 engineering inspectors. The Home Office has set up an Industrial Museum for the exhibition of the latest means of avoiding industrial hazards. The Home Office is also concerned through the local authorities, with the administration of the Shop Acts. The Mines Department of the Board of Trade directly administers the legislation concerning mines. It employs a mines inspectorate, but there is only one medical inspector. The Merchant Shipping Acts, dealing with the safety and health of sailors, are administered by the Board of Trade, and the Ministry of Transport concerns itself with the safety of transport workers. Other Government agencies for the prevention and cure of industrial disease include the provision of a wool disinfecting station at Liverpool, the Safety in Mines Research Board, the Industrial Health Research Board, and the Department of Scientific and Industrial Research, administered respectively by the Home Office, the Mines Department of the Board of Trade and a committee of the Privy Council. The International Labour Office, with which the Government collaborates, carries out invaluable work in promoting the improvement of industrial conditions, and as a result of its efforts, numerous draft conventions, to some of which Great Britain has adhered, have been prepared. It has also made recommendations concerning the improvement of working conditions. A correspondence committee on industrial hygiene has been set up. A bibliography of industrial hygiene has been published, and an industrial safety survey is published bi-monthly.

Local Administration

County borough and district councils and, in Scotland, county and burgh councils, under the Factories Act 1937, must enforce some of the provisions of the code relating to sanitary conveniences and the means of escape in the case of fire. They will also be responsible for all the provisions of the new code in respect of cleanliness, overcrowding, temperature, ventilation and drainage of floors in most factories not employing mechanical power. In the normal course of their work they are the authorities concerned with preventing smoke, effluents and other nuisances from a factory affecting the neighbouring population. The local authorities are also responsible for the conditions of work in shops under the Shops Acts, and under the Public Health Acts local authorities have power to insist on the provision of sanitary conveniences in offices.

The Administrative System considered critically

The allocation of the Factory Department to the Home Office has long been a matter of dispute. The Machinery of Government Committee—the Haldane Committee which reported in 1918—envisaged a Ministry of Employment and considered that it should be responsible for all the functions which have just been described, and which are performed by a number of departments. They pointed out that the entrusting of factories inspection to the Home Office was an historical accident due to the fact that "In the first half of the nineteenth century, when these Acts were conceived, they were regarded . . . not as measures for the improvement of the industries to which they applied—as they have since very largely proved to be—but merely as acts of police designed to prevent particular offences of oppression."

They recognised the case as a borderline one, and suggested that although the service did not appear "proper for inclusion in the sphere of the Ministry of Health, at any rate at the outset," it might well be the subject of a joint arrangement between the Departments concerned, or of the undertaking by one Ministry of the services on behalf of the other.

The Haldane Report's Ministry of Employment has not yet been created. Moreover, the Ministry of Labour, which is, of course, mainly concerned with labour questions, is associated both by employees and employers with the fixing of wages. But the Home Office has never allowed its inspectors to become involved in questions connected with wages. Consequently, the creation of good relations between its inspectors and employers and employees, particularly employers, has been facilitated. Since 1918, however, the Ministry of Health has been created and has grown in power and prestige until it has become a dominating department in all matters relating to health and local government affairs. Therefore there is some case for the inclusion of the Factory Department in the Ministry of Health and in the Department of Health for Scotland. It is strengthened by the fact that the medical officer of health and the sanitary inspector, who are responsible for the local administration of the Factories Act, are used to working closely with the Ministry of Health. Co-operation between these officials and the Factory Inspectorate is obviously vital, for without it friction may occur. However, one serious objection to incorporating the Factory Department in the Ministry of Health and in the Department of Health for Scotland would be the fact that there would be no machinery for securing that the standards of inspection were the same in both countries, and it might be claimed that employers in one or other country were gaining an advantage over their competitors.

The paucity of staff of the Factory Department has been very unfavourably commented on. There are only 264 inspectors for the 278,157 premises subject to inspection, although it has been stated that with the increase of work under the new Act, the staff will be increased. Various suggestions have been put forward to relieve the pressure on the inspectorate and to secure an efficient and continuous inspection of small factories. Premises employing less than, for example, 10 persons, might be put under the supervision of the local authorities. While the smallness of the concern would alleviate the danger of the "overmighty subject" bringing undesirable pressure to bear on the authority, it would not prevent a combination of small but collectively powerful local manufacturers bringing the same kind of pressure. Moreover, it would set up a dual standard of inspection for factories, but it would at least provide some inspection where now there is often none. The bringing of undesirable pressure on authorities has undoubtedly hampered the administration of the Shops Act. The examining surgeon, who is frequently brought in contact with the factory through his medical inspections of employees, might be empowered and encouraged to report flagrant breaches of the law. The pioneering work of the medical inspectors of the Factory Department in face of numerous difficulties has been invaluable. Yet only eight medical inspectors of factories and one medical inspector of mines are employed to supervise conditions affecting the health of the entire industrial population.

Industrial Medical Officers

Clearly, the minimum measures for the preservation of health and well-being enforced by present legislation are not adequate, either to keep the employees in a good state of health, to obtain the maximum industrial efficiency, or to save the nation the enormous expense caused by accidents and sickness. These facts were partially realised during the War, which impinged on English social life just when the extreme *laissez-faire* doctrine that profit was earned in the last hour of work had been thoroughly discredited. It was recognised then that something had to be done to offset the increased strain of intensive work and long hours in order to obtain maximum efficiency within the factory. Consequently, so-called "welfare" measures were introduced. This movement was hastened by the influx of large numbers of women into the factories and the control of the Ministry of Munitions over so much of industry. Some of these measures survived the post-War slump, although a great deal of the work of the Health of Munition Workers Committee was forgotten. Now, employers are beginning to appreciate the loss incurred through a high labour turnover due to sickness or to discontent caused by bad conditions. Others cannot forget the large sums they have to pay away in workmen's compensation. Consequently, experiments have been made in extending "welfare" work, and some of these have been mentioned above. The beginnings of a nursing service have been introduced into industry, and a few large firms have created their own medical departments.

The medical department in a factory includes either a part-time or a whole-time doctor, and it must have a staff or nurses, numerically in proportion to the number of employees. It may also include a dental department. The latter is generally operated in working hours and under systems of payment by instalments, which help to popularise it. An industrial medical officer, by his work in the treatment and prevention of industrial accidents, by the advice he gives both to the management and to the workers, can contribute materially to the sense of security, safety and harmony in a factory. The saving in compensation costs due to safety measures and prompt treatment is considerable. In the Supplement to the *British Medical Journal* of April 24, 1937, "The Duties of and Ethical Rules for Industrial Medical Officers," recently approved by the Representative Body of the B.M.A., are set out. The duties that the B.M.A. considers industrial medical officers may properly undertake include *inter alia* the immediate treatment of medical and surgical emergencies; the examination of applicants for work, of persons returning to work after an illness, and of persons exposed to special hazards; responsibility for the efficiency of the nursing and first aid services; rendering advice to the management on matters connected with the health of the workers, the hygiene of the factory and accident prevention arrangements; the continued observation of all young persons with a recommendation where necessary for the provision of free meals and milk; the medical supervision of canteens; the rendering of advice to the works councils and welfare departments on matters connected with health and ready accessibility to employees for medical advice upon matters relating to their work. Thus, while providing an essential service, the industrial medical officer is free to act in a variety of ways as a link between worker and management, and so to perform a valuable function in enlightened personnel control. The Ethical Code is designed primarily to facilitate the smooth co-operation between works doctors and the worker's own doctor. It advocates a system of working which, while enabling the maximum benefit to accrue to employer and worker, safeguards the essential doctor-patient relationship and thus protects the worker's confidential and private affairs. Within this code the industrial medical officer and the general practitioner can help each other from the special knowledge of each. It is a good example of the free development of new ideas within a framework of well-tested and time-honoured ethics. The industrial medical officer is advised not to hold the position of certifying factory surgeon in the same area as that in which he is working. But since the adoption of the code a modification has been inserted in the Factories Act 1937 (Section 126 (3)) which sub-divides, at the discretion of the Secretary of State, the functions of the examining surgeon and an industrial medical officer may be appointed under the Act to examine young persons only. This apparently removes the B.M.A.'s objection. It is thought that there are about fifty doctors employed whole-time in industry. Large numbers of other doctors are employed on a part-time basis.

The need for the closest co-operation between the employers and the employees in the setting up and development of a medical department cannot be over-emphasised. For employees, if their confidence is not gained, may be very suspicious of the department. Moreover, co-operation ensures that the department cannot be in any way used for tyrannical purposes. Its misuse in this way is possible in the hands of unscrupulous employers.

Medical departments have been introduced in industries engaged in very different types of work. Consequently, the organisation, the functions, and the results of the introduction of a medical department, vary considerably. Those industries with some kind of hazard from processes or poisonous substances get, perhaps, the greatest apparent return. For example, the industry engaged in the manufacture of electric accumulators was an extremely dangerous one, and it provided the highest incidence of lead poisoning in the country. Before the institution of its medical service, the Chloride Electrical Storage Company, employing some 3,000 persons in its factories and depots scattered about the country, was no exception. Since the introduction of the medical service, however, the number of cases and the amount of sickness resulting from lead poisoning in this concern has been reduced to negligible proportions.

In heavy industries, where the accident rate is high, the importance of a specially trained doctor cannot be over-emphasised. It has been shown that the important thing to do in the case of a serious accident is to give the patient treatment for shock, including resting him in a well-equipped ambulance room rather than rushing him to hospital in an ambulance, transporting him from the ambulance to the casualty department, from the casualty department to the ward, and from the ward to the operating theatre. In the Witton Works of I.C.I. Metals, Ltd., employing about 7,000 persons and covering a large area of ground, an accident case can be in an ambulance room in three minutes and in the doctor's hands within at the very most fifteen or twenty minutes, since a doctor is always on call during working hours. Furthermore, coinciding with the introduction of a medical service in 1932, the number of cases of persons losing time through sepsis fell from 3 per cent in 1931 to 0.2 per cent in 1935. Some firms have introduced up-to-date and elaborate clinics, particularly if they are not situated near a hospital. At the works of Pilkington Bros., Ltd., St. Helens, where there is danger of accidents due to glass, the central surgery includes an operating theatre, sterilising rooms, an X-ray room, dark room, masseur's room and apparatus for administering physio-therapy.

There are several firms in light industries which also employ a medical officer. The doctor is valuable here in dealing with accidents in connection with conveyors and other methods of mass production, and in connection with safety and general health regulations. Since these industries often employ a large amount of unorganised female labour, which is generally subject to a high labour turnover and high sickness absence rate, the value of a whole-time medical officer is apparent. Carreras, Ltd., for example, employing 2,000 females and 600 males in cigarette manufacture, has a whole-time doctor; so also has Joseph Lucas, Ltd., employing 20,000 persons in seven different factories making electrical accessories. At two cotton mills belonging to Barlow & Jones, Ltd., employing together 1,236 persons, a doctor visits the mills once a week, and young persons have a general medical examination every six months. The problems in these industries are often problems for the physician and the psychologist rather than for the surgeon.

Outside factory industry the most important medical service is that belonging to the Post Office. All established Post Office employees earning under £230 a year in London, and £215 in the provinces, are entitled to free medical attention, and consequently are exempt from the National Health Insurance Scheme. There are on the establishment 120,000 men and 35,000 women. The medical service is provided by about 2,600 general practitioners paid on a capitation basis. These are responsible for sickness absence, and they also examine all prospective Post Office employees and advise the local Post Office executives on medical questions. In London there is a whole-time headquarters' staff, consisting of eleven doctors, five of whom are women. The four assistant men and four assistant women doctors give clinical advice to the central staff of 24,000 in London. The medical branch also advises on the shape and suitability of uniforms, the distances covered by postmen, and the weights they carry. Not the least valuable part of its work is the keeping of the medical records over a long period of time of large numbers of employees.

Quite a large number of food and drug manufacturers employ whole-time medical officers. It is essential that only healthy and clean persons should handle food. Persons, for example, with septic teeth in a food factory might be a real danger to the consumer. In their chocolate factory at Bournville, Cadbury Bros., Ltd., have a whole-time doctor and three nurses. Dental examination and treatment is a condition of employment, and is provided free to all employees under 18 by their whole-time dentists. A private dentist also uses the works' clinic for providing dental treatment to other employees. Boots Pure

Drug Co., Ltd., employ a whole-time medical officer, who is responsible for their factories and warehouses at Nottingham and Beeston, for their London warehouse, and for many matters connected with their large retail staff. The nursing staff comprises seven sisters and trained nurses, six V.A.D. nurses and a hospital-trained almoner. The latter and three of the trained nurses act as health visitors inquiring into cases of hardship. The visiting nurses care for large numbers of sick persons under the direction of the patient's general practitioner. J. Lyons & Co., Ltd., the caterers, also employ a whole-time medical officer at their headquarters in London, who is responsible for both the headquarters staff and the outside staff.

Some sections of the transport industry employ whole-time doctors. Since the 1894 Merchant Shipping Act all ships carrying more than 100 persons, and all emigrant ships, have had to carry a medical officer. The Cunard White Star Company have appointed a whole-time doctor at their head office. The Shipping Federation, Ltd., now arrange for the medical inspection of all seamen signed for employment. Medical examinations of new employees and of employees returning to work after illness are also carried out by whole-time doctors for the railways. The L.N.E. Railway employ four medical officers, who do no treatment work at all. The LMS Railway employ five whole-time medical officers for the purpose of carrying out tests. For example, the railways are particularly careful to see that the eyesight of their employees is good. The LMS Railway, in their "workshops," or more correctly, their factories, at Crewe, have their own accident hospital, with a resident medical officer and staff. Apart from dealing with accidents in the works, this doctor has evolved interesting and novel schemes for rehabilitating disabled men. He has, for example, a gymnasium and a workshop in which men can gradually get fit.

Many colliery firms have arrangements whereby local doctors can be summoned to the colliery to attend cases of injury or illness. The Ashington Coal Company employ a surgeon and an assistant to deal with all accident cases. Among other things, he recommends suitable light work for convalescent cases, medically examines new employees and deals with compensation cases. Appropriate buildings and equipment are provided. The services of the surgeon and the assistant are also loaned to the local hospitals to enable them to treat accident cases there. The Walkden Collieries near Manchester are constructing a clinical centre for massage and electrical treatment. Most colliery companies also have arrangements whereby a doctor medically examines employees claiming compensation to determine the disability due to an accident. Some have nurses to deal with slight accidents. In Scotland the Lanarkshire Medical Practitioners' Union, with the financial assistance of the Miners' Welfare Fund, have organised a clinic system to give orthopædic treatment for injuries and their after-effects, and to deal with chronic rheumatic affections. The Miners' Welfare Fund also makes grants for the creation and maintenance of ambulance services in colliery areas, for the support of miners' convalescent homes, and to schemes for providing miners with medical treatment and appliances.

In this brief account it will be seen that medical services in industry can be organised in a variety of ways. In I.C.I. Metals, Ltd., employing over 10,000 persons in factories in Birmingham, Leeds, London, Swansea, Sheffield, Manchester and elsewhere, the medical service includes a group medical officer responsible for the whole service, and an assistant medical officer, both with headquarters at the largest factory; five part-time medical officers, ten nurses, and eight whole-time ambulance attendants. One of the part-time doctors also happens to be the medical officer to the Mond Nickel Company, Ltd. This firm dominates the village of Clydach, near Swansea, and the local hospital is largely supported by the firm itself and by the contributions of the employees. Consequently, it has become an integral part of the local industrial medical service and has added much to its value. The I.C.I. group employ six whole-time and forty-two part-time medical men. Sometimes a local general practitioner is appointed medical officer to a number of firms. In Coventry the medical officer of health has been appointed honorary medical adviser (factory welfare) to the Coventry Engineering Employers' Association, which includes eighteen large engineering firms, with a staff of safety officers who act as liaison officers between the factories and the public health department. Elsewhere, as, for example, at Messrs. Rowntree & Co., Ltd., and Pressed Steel Bodies, Ltd., a medical officer is employed to deal with one factory, although most whole-time doctors are concerned with two or more units.

Voluntary organisations concerned with industrial health include the Association of Certifying Factory Surgeons and the Association of Industrial Medical Officers. There is also an advisory medical committee in connection with the Industrial Welfare Society, which itself is concerned with the problems of industrial health. A medical adviser is employed by the Trades Union Congress to give technical assistance on these matters. The National Institute of Industrial Psychology study other aspects of industrial health. The Council of the College of Nursing have also introduced training courses for industrial nurses.

A joint committee of the B.M.A. and the T.U.C. has been set up to consider and advise on subjects of mutual interest to these organisations. After the publication of the Factories Bill this committee made representations to the Home Secretary upon certain aspects of the Bill. Institutions such as the National Safety First Association carry on valuable propaganda work against accidents. Teaching and research work are done at the London School of Hygiene and Tropical Medicine, where there are departments of Industrial Physiology and of Industrial Medical Psychology. Instruction on industrial medicine is given in the routine course at this school for the Diploma of Public Health in London University. There is a department of industrial hygiene and industrial medicine at Birmingham University. The General Medical Council has also advised medical schools that after January 1938 instruction should be given in industrial diseases to all medical students.

The Place of the Industrial Doctor in the Industrial Health Services

The introduction and the development of an industrial medical service opens a vast complex of problems. It is believed that unless there is a special occupational hazard it is uneconomic to employ a whole-time medical officer where less than 3,000-5,000 persons are employed, and only about 1 per cent of the industrial population are in factories of this size. Smaller factories have many of the problems which the whole-time industrial doctor is called upon to solve in a large firm. Possibly the employment of medical officers by a combination of firms will help to solve this problem. For, as has been seen, most whole-time medical officers are responsible for more than one unit within industry. A fruitful experiment could be made on Trading Estates, where it would be easy to employ a joint industrial medical officer. At some future date it may become compulsory for a firm employing, for example, over 10,000 persons, to employ a whole-time doctor. Certainly, it is regrettable that there are firms with high accident rates and specific occupational hazards employing upwards of 10,000 persons which do not have a doctor on the premises. The employment of industrial medical officers by local authorities or the Home Office, for the purpose of giving independent industrial health advice might be tried in some areas.

The relationship between the industrial medical officer and the management, and his position in the factory have not been fully worked out. General directions are laid down in the 'Duties of and Ethical Rules for Industrial Medical Officers,' which have previously been mentioned. But possible sources of friction may arise. For example, these rules state specifically that the medical records of the workers maintained by the industrial medical officer are confidential documents and must remain in his custody until handed on to his successor. Yet legally it appears they belong to his employers. Obviously, however, it is absolutely essential, if the industrial medical service is to be effective, that professional secrecy should be strictly observed, for without it an industrial medical officer cannot overcome the natural suspicion of the worker towards a servant of his employers. A particularly difficult case might arise if, as is always possible, the firm decided to abandon its medical service. Then the industrial medical officer would probably have to destroy the records. The Ethical Rules also state that an industrial medical officer is responsible for instructing nurses employed in his factory to observe the proper ethical code for nurses. This again might bring him into conflict with shortsighted employers.

Under the National Health Insurance Act of 1911, great hopes were entertained of the machinery whereby liability for a high sickness rate could be attributed to any employer or local authority if sufficient evidence were forthcoming. Moreover, penalties can be imposed on an employer against whom a charge of this sort can be substantiated. In fact, however, no measures have ever been taken to implement this power. Thus, valuable machinery which might have been a point of contact between the work of the industrial medical officer and the other medical services has never had an opportunity of working. The necessity for co-operation between all the medical services cannot be overemphasised.

The relationship between the general practitioner and the industrial medical officer has been defined in the Ethical Code mentioned above. This code, as has been shown, facilitates the co-operation of general practitioners and industrial medical officers. It is also opposed to industrial medical officers giving domiciliary treatment. It is unethical for a whole-time industrial medical officer to treat any member of a worker's family not employed in the factory. A part-time industrial doctor must not utilise his position to influence the worker to choose him as medical attendant or family doctor. Day to day co-operation between works doctors and general practitioners is vital. For in problems involving a knowledge of home conditions and past medical history, such as those connected with psycho-neuroses, the industrial medical officer must rely on the assistance of the general practitioner. Close liaison must also be maintained between the industrial medical officer and the medical officer of health.

Medical Examinations

The medical examination of new employees is an important part of the whole question of selection. It needs wise handling, but it can well be made to operate to the benefit of both employer and employed; for, unlike the medical examination for the Services, it should not aim at dividing applicants into an acceptable élite and a group of physical rejects. Wise medical selection should aim towards absorbing into the industry all who can be rendered fit to do the available work. It safeguards the employer from accepting totally unfit workers, but it also prevents workers from engaging in work which will endanger their health. Thus it can be used as a means of securing employees the employment for which they are best suited. But it can be misused by employers, and therefore create grave suspicion in the minds of employees that they are being regimented. Furthermore, by following up the initial examination in requisite cases, it is possible to pilot workers (especially young workers and those who have been unemployed) over any difficulties of necessary adaptation. The whole issue, including the problem of the rejected candidates, is one that needs careful consideration, but it would be unfortunate if a service so useful from a medico-sociological point of view should rouse uncritical opposition merely because in certain cases it is not organised wisely or fairly.

As industry becomes a greater factor in the organisation of social life, medical examination of industrial entrants assumes greater importance, but it should operate to the benefit of both parties—employer and employee.

Education in Industrial Health Problems

The worker needs reliable information to enable him or her to protect and even improve health in any given environment. The employer and responsible authorities need it in order that the given environment may be of the best. The late Sir Thomas Legge said: "Until the employer has done everything, and everything is a good deal, to protect the worker the latter can do nothing to protect himself."

The factors in individual health in industry are three: (1) specific dangerous hazards (2) physiological environment (3) psychological. Education must aim at disseminating knowledge of facts, but it must go further. In the education of future administrators and industrial leaders, there should be a groundwork of elementary physiological principles designed so that they may not only be able to understand the issues involved, but may know how to appreciate a situation sufficiently to call for technical advice at the right time.

The work of the Industrial Health Research Board, the reports of the Chief Inspector of Factories, and the various excellent publications on environment and conditions in industry, are still largely wasted because, among both employers and to a less but still marked degree, among Trade Union leaders, the realisation of the full implication of physiological data is lacking. The recent bus dispute revealed a marked failure on the part of otherwise educated persons to grasp what was really an issue. A great deal of industrial unrest arises out of the lack of opportunity for the maintenance and enjoyment of full functional fitness, physical and mental. The scientific approach to human relationship is essential to sound progress, but unless people are equipped with the necessary knowledge, the wood becomes obscured by the trees. The basic requirements are not onerous, but it is essential that all who control other poeple's lives, often through remote control with very little personal contact, should have that minimum of physiological education which will enable them to understand what the experts are talking about. The remedy for this lies in the hands of the examining bodies who indirectly control school and university policy.

The dissemination of facts is independent of their accumulation. Vast stores of data are available regarding the different health problems of industry. For example, in the erection of buildings ventilation is often so inefficiently studied that subsequently its rectification costs three or four times what a proper plant would have entailed at the start. The atmospheric and lighting conditions, machine design, the causation of accidents, protective appliances, the arrangement of hours, the feeding and transport of workers, and a host of allied matters, have been exhaustively studied, but the application of the knowledge hangs fire. This is partly because the problem is inadequately appreciated at its full value, partly because initial cost blinds people to future savings, and very largely because many people do not know how to get at the facts they need. Some means of organising the dissemination of available knowledge is needed. Proposals for a national advisory body, which would collate information and co-ordinate research, and make the findings available to all interested parties, are being made the basis for further study by P E P.

There are other difficulties: but the two essential steps are (1) a central co-ordination of ascertained knowledge (2) a broader basis of scientific humanism in secondary education, which must be basically physiological.

Industry being very largely organised in small units, it is obvious that many health problems that arise may be referred by industry to local doctors. This is valuable not only to industry, but to the doctors in the deeper appreciation of their patients' background. For these doctors and for the bulk of the medical profession, some knowledge of occupational medicine is needful. In London and Birmingham Universities courses are available to doctors, and these need extension and financial support. They could be utilised, for example, in the post-graduate training for panel practitioners which the Ministry of Health is financing.

The effective handling of industrial health problems calls for the pre-existence of a sound labour management policy, which brings us to the point of realising the third factor at issue. Psychological, or, more simply emotional, factors influence health, efficiency and contentment to a high degree. In the absence of wise labour control, much on the physical side is cancelled out if managers, supervisors and foremen are inadequately trained and educated. The influence of the foreman in industry is profound, and it is to be regretted that so much power is often given without a corresponding educational equipment for its wise exercise. But it is impossible to analyse this problem here. Some aspects of it are, however, being examined by the P E P Partners in Industry Inquiry.

IV. HEALTH SERVICES FOR MOTHERS AND CHILDREN

Maternity and Child Welfare: Introduction—Maternal and Infant Mortality Rates—Statistical Studies into the causes of Maternal Mortality in England—Scottish Maternal Mortality Rate—**Maternity Services:** Ante-Natal Care—Institutional Provision for Maternity Cases—Midwifery Service—The General Practitioner—National Health Insurance—Home Helps—Post-Natal Care—**Infant Welfare:** Provision for the Unmarried Mother and her Child—Propaganda and Education—**Improvements:** A National Maternity Service for England and Wales—Scottish Maternity Services—Method of Financing a National Maternity Scheme—Co-ordination of Administration—Co-operation in the Maternity and Child Welfare Services—Maternity and Child Welfare Services and Social Conditions—**The Health of the Pre-School Child:** Introduction—The Health of the Pre-School Children—Maternity and Child Welfare Centres—Day Nurseries—Nursery Schools—School Attendance and Nursery Classes—Conclusions—**School Medical Service:** History—Administration and Scope of the School Medical Service—Medical Inspection—Treatment—Staff of the School Medical Service—Special Schools—Medical Services in Junior Instruction Centres—Voluntary Work—Gaps in the School Medical Service—Provision for the Normal Child—Relation of the School Medical to Other Services.

This Chapter discusses the services, official and unofficial, dealing with the health of mothers and children. It is divided into three sections, the first concerned with maternity and child welfare, the second with the health of the pre-school child, and the third with the school medical service.

MATERNITY AND CHILD WELFARE

Introduction

The Maternity and Child Welfare movement, which, even before the War, had been developing rapidly, chiefly on a voluntary basis, was given a real impetus between the years 1914 and 1918. As a result of the Notification of Births (Extension) Act 1915 and the Maternity and Child Welfare Act 1918, Exchequer grants became available to local authorities and voluntary bodies in England and Wales and enabled them to improve and extend maternity provision, infant consultative centres and health visiting. Under the 1918 Act local authorities (as set out in Appendix I) have power to provide ante- and post-natal clinics, a system of home visiting, infant welfare centres and assistance to midwives and they may remit midwives' fees in necessitous cases. They may provide maternity homes, or beds in the maternity wards of general hospitals, and convalescent homes for mothers. It should, however, be observed that except for attendance and advice at the centres, the mother is usually expected to contribute according to her means towards the expenses of the services she receives. Under the Midwives Act 1936, the supervising authorities (see Appendix I) in England and Wales are compelled either to institute a salaried midwifery service or to finance that of voluntary bodies.

In 1930, as a result of the Local Government Act 1929, the Ministry of Health ceased to make direct grants to voluntary bodies carrying on maternity and child welfare services. These, however, are now paid by the local authorities out of local funds and rates, assisted by the general Exchequer grant known as the block grant. The Factories Act 1937 and the Public Health Act 1936 re-enact that it is an offence knowingly to employ a woman in a factory during the four weeks following child-birth. The National Health Insurance scheme provides maternity benefit for insured women and for the wives of insured men.

As, however, local authorities are not compelled to make full use of their powers under the Maternity and Child Welfare Acts, the provision of maternity services varies enormously in different parts of the country, for while some authorities set a high standard others do not attempt to carry out their responsibilities to the full.

Maternity and child welfare schemes of the local authorities were set up in Scotland under the Notification of Births (Extension) Act 1915. The Maternity and Child Welfare Act 1918 authorised the erection of hospitals for the purposes of the service. Under the Local Government (Scotland) Act 1929, schemes were established in those areas—mainly rural—which had hitherto been uncovered, and by the end of 1935 schemes of varying completeness were in operation throughout all Scotland. The schemes generally follow the same lines as in England, but the Maternity Services (Scotland) Act 1937, which comes into full operation in 1938, provides a more extensive maternity service than does the Midwives Act 1936 for England and Wales, or indeed, than any other legislative provision. The conditions of midwifery practice in Scotland differ from those existing in England, doctors being engaged in midwifery practice to a much greater extent in Scotland than in England and midwives alone to a correspondingly less extent. Under the Maternity Services (Scotland) Act a medical and consultant service is set up, in addition to a midwifery service, for women who elect to be confined in their own homes.

Maternal and Infant Mortality Rates

While death rates from nearly every other cause have been steadily falling, there has until very recently been a slight but definite upward trend in the maternal mortality rate for many years. The risk of child-birth is not high. There is one maternal death to about 260 live births. Nevertheless, there should only be a very limited risk in a normal physiological process, and no maternity service can be regarded as adequate until such risk has been reduced below the present level.

Figure 2 shows the movements of the maternal mortality rate in the past 45 years.

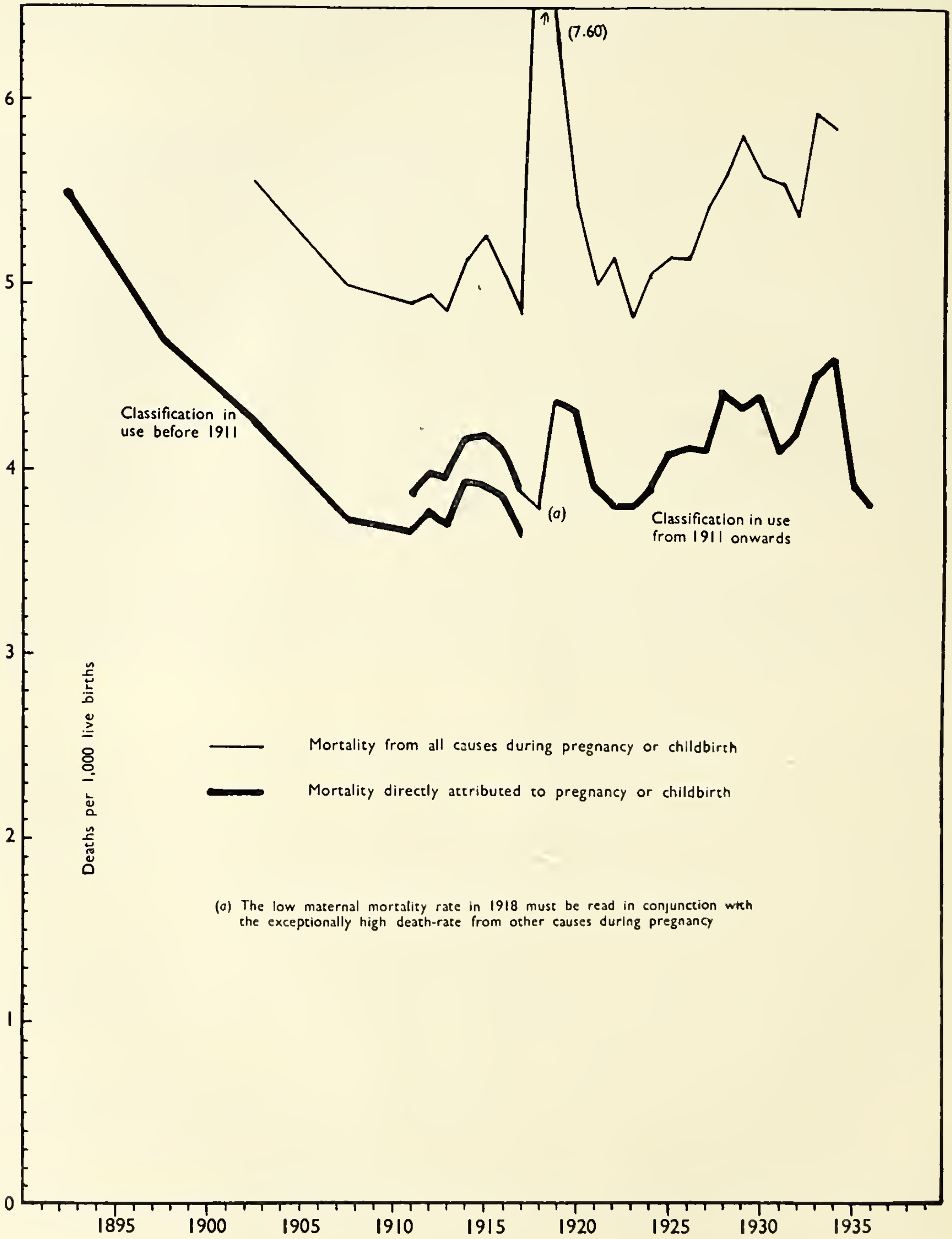
It will be seen that apart from minor fluctuations there has been an upward trend since the War until the last two years, but in 1936 the figure was 3.81, the lowest since 1922 and the second lowest on record.

These figures are on a comparable basis, making allowance for changes in classification over the period. It is possible that a small part of the recent rise may be due to more careful diagnosis of cases which would formerly have been returned as due to unknown causes, but it cannot be more than a very small part.

One factor, which is sometimes brought forward to account for the apparent lack of improvements, is the increasing proportion of first births. It is estimated that the risk of

Figure 2

MATERNAL MORTALITY RATE IN ENGLAND AND WALES 1891-1936



— Mortality from all causes during pregnancy or childbirth

━ Mortality directly attributed to pregnancy or childbirth

(a) The low maternal mortality rate in 1918 must be read in conjunction with the exceptionally high death-rate from other causes during pregnancy dying after pregnancy has lasted seven months grows less at successive pregnancies up to the third, and then rises, the fifth being about equal to the second, and the seventh or eighth to the first. Thus the increasing proportion of first and second pregnancies is partly compensated by falling proportion of all pregnancies after the third. In the Report on an Investigation into Maternal Mortality* (relating only to England) it is calculated that these compensating factors may possibly have resulted in raising the mortality rate by as much as 0.1 per 1,000 births in ten years, but not more. It will be seen from Figure 2 that the actual rise has been much more than this.

Another factor which has not been assessed in detail is the increasing average age of mothers. The composition of the age-group 15-45 is continually shifting and, moreover, there is some tendency on the part of individuals to postpone marriage. The average age of women of childbearing age may be expected to rise even faster in the next few decades, and thus the risk at each age will have to be reduced even to keep the mortality rate down to its present level.

Some indication of maternal morbidity is given by the death rates of very young babies. While the maternal mortality rate has been rising, the death rate of infants under one day old has remained stationary, and that of infants under one week has not appreciably fallen. Such deaths are about five times as frequent as maternal deaths: that is to say, about one baby in 50 dies within a week of its birth. The persistence of this disturbing symptom is often masked by the tendency to quote the "infant mortality rate," that is the death rate during the first year, which has been much reduced by improvements at later ages. A detailed study of this subject is made in Chapter XV.

The causes of infant mortality can be roughly grouped as either premature birth and congenital causes, or diseases primarily affecting the infant (infectious diseases, diarrhœa, etc.). The second group are most deadly in about the second month of life, and the risk does not decline very rapidly with the infant's growth. But the risk of death from the first group is appreciably reduced every hour immediately after birth, and continues to fall away very rapidly during the subsequent weeks. Such reduction as has occurred in the deaths of very young babies has been concentrated in the second group of causes. On the other hand, there has been a marked reduction in deaths at ages after one month due to premature birth and congenital causes.

The incidence of puerperal mortality is higher in certain regions of England and Wales than in others, and there has been approximately the same regional distribution for the past 50 years. Wales has a consistently higher rate than England, and the North and West of England have a higher average rate than the South and East of England, including London. Over the period 1923-33 the rate was 7.05 in Halifax and 2.35 in Bethnal Green. Similar regional differences are shown also in the general death rates, infant mortality rates, tubercular and other rates.

In 1928 a Departmental Committee on Maternal Mortality and Morbidity was appointed by the Ministry of Health to inquire into the whole problem of the high maternal mortality rate. They issued their final report in 1932.† The committee conducted an investigation into the actual circumstances of a large number of deaths and were concerned chiefly in discovering which were the primary avoidable causes in the train of events that led up to the fatal issue. From their evidence they concluded that absence of adequate ante-natal care and error of judgment on the part of doctors and midwives were the most common avoidable causes, while a lack of reasonable facilities and negligence by the patient and her friends were also of considerable importance. The committee held that "while there can be no doubt that abortion plays a serious and regrettable part in the production of puerperal sepsis, and therefore in the causation of maternal morbidity and death, they are unable to find evidence to support the opinion that an increase of deaths from abortion, of sufficient magnitude materially to affect the maternal death rate, has taken place in recent years." The conclusion of the committee that about half the maternal deaths in this country are preventible can certainly give little cause for satisfaction with the maternity service.

---

* Cmd. 5422 H.M.S.O. 1937. 5s. 6d. net.

† Interim Report H.M.S.O. 1930. 2s. net. Final Report H.M.S.O. 1932. 2s. 6d. net.

In April, 1937, two reports were published by the Ministry of Health: a report on an Investigation into Maternal Mortality,* which had been in progress since 1934, and a report on Maternal Mortality in Wales.† The investigation in England was carried out by medical officers of the Ministry who reviewed maternity services in the majority of areas which had a maternal mortality rate of over 5 per 1,000 in the decade 1924-33, and in certain other areas in which the average maternal mortality rate had been relatively low. The report on this investigation supports the findings of previous reports respecting the variety of causes which contribute to the high maternal mortality rate. The causes may be summarised under four headings: (i) absence or inadequacy of ante-natal services; (ii) errors of judgment on the part of doctor or midwives; (iii) lack of effective medical treatment, and (iv) failure on the part of the mother to seek advice, or to follow advice given her. This report finds that the apparent failure of the maternal mortality rate to respond to the methods adopted is not due to the methods themselves being wrong, but points to the need for further development of those methods, the extension of the maternity services to cover greater numbers of women, a greater degree of co-operation between the branches of the service, and, above all, more competent midwifery before, during and after child-birth.

Statistical Studies into the Causes of Maternal Mortality in England

The investigation by the Ministry of Health in 1934-37 included four special statistical studies in selected areas undertaken with a view to finding out the reasons for regional variation in maternal mortality rates. In the first inquiry the aim was to find whether any correlation existed between the maternal mortality rate and overcrowding. Among the 10 West Riding county boroughs which were investigated, puerperal mortality tended to be highest in those with most overcrowding, but in the 17 Lancashire county boroughs which were investigated and among the 28 metropolitan boroughs, the reverse was the case. The report concluded that overcrowding did not appear to have an adverse influence on maternal mortality.

A second statistical inquiry showed that the proportion of women employed in any "gainful occupations" and the rates of puerperal mortality tended to rise and fall together in sample areas. When "industrial occupation" was substituted for "gainful occupation" this tendency was emphasised.

---

* Already referred to (Cmd. 5422).

† Cmd. 5423 H.M.S.O. 1937. 2s. 6d. net.

A third statistical inquiry was made into economic conditions in relation to the incidence of puerperal mortality. The average annual rate of employment in each year and the mean rate of unemployment over a period of years was calculated for each of the areas under consideration, and the rates were compared with the puerperal mortality rates of these areas. The report concluded that in the 40 selected areas of England, the rates of puerperal mortality appeared to be entirely unrelated to the degree of unemployment experienced during the years 1927-34.

A fourth statistical inquiry established a positive correlation of moderate degree between a high rainfall and high puerperal mortality rate.

Further inquiries were made into maternal mortality according to the number of previous confinements, and into the effects of social grade, twin pregnancy, and the declining birth-rate. One of the conclusions resulting from the inquiry was that rates of mortality from all puerperal causes among the wives of men classified according to their occupations decline in passing down the income scale from professional to unskilled class. Some of this decline was attributed to the higher proportion of first pregnancies in the upper classes, but this was partly compensated by the higher proportion of pregnancies after the third in the lower classes, and it was not thought to account for the whole of the difference. It was not possible to compare the death rate age by age of mothers in different classes, but the greater average age of the mother in the higher income groups is probably an important factor.

In 1935 39 per cent of all puerperal deaths in England and Wales were ascribed to sepsis, 19 per cent to toxæmias and 10 per cent to hæmorrhage. Just over a quarter of the deaths from sepsis followed abortion (spontaneous or induced), and a further 4 per cent of the total were ascribed to abortion not returned as septic. Thus 14 per cent of the total deaths were returned as following abortion. It is, of course, not known how many of the deaths followed attempted abortion, but such attempts may well account for many cases of sepsis. The Report on an Investigation into Maternal Mortality states that testimony to the prevalence of attempts to terminate pregnancy was given in practically every urban area visited, and that although it is not possible to obtain statistical data, it is certain that the practice of abortion is all too frequent; that the dangers do not appear to be generally realised, and there is urgent need for the enlightenment of women regarding the grave risks entailed. As a result of these findings an inter-departmental committee has been appointed by the Minister of Health in conjunction with the Home Secretary, under the chairmanship of Mr. Norman Birkett, K.C., to inquire into the prevalence of abortion, with special reference to its effects on maternal mortality and morbidity, and on future child-bearing.

The Scottish Maternal Mortality Rate

The maternal death rate has always been higher in Scotland than in England, being approximately 6 per 1,000 births. The 1936 rate of 5.6 was the lowest attained. This persistently high maternal death rate constitutes one of the most stubborn of Scottish health problems and has been the subject of two special investigations, the results of which were given in the Report of the Scottish Departmental Committee on Puerperal Morbidity and Mortality published in 1924 and in the Report on Maternal Morbidity and Mortality in Scotland, published by the Department of Health under the auspices of their

Scientific Advisory Committee in 1935. The latter report was based on an examination of 2,527 maternal deaths. The problem was further considered by the Committee on Scottish Health Services who reported in 1936. It is hoped that the measures provided in the Maternity Services (Scotland) Act 1937, which will be discussed later, and which followed particularly the proposals in the Report of 1935 and in that of the Committee on Scottish Health Services, will be effective in reducing the high rate of mortality for mothers and infants alike.

THE MATERNITY SERVICES

These may conveniently be divided into services for ante-natal and post-natal care, and services available at the time of the confinement.

Ante-Natal Care

Ante-natal supervision is provided by the private doctor with or without the aid of a nurse or midwife for routine care, or by a midwife herself (in Scotland this will not generally occur), or through the ante-natal clinic, which is usually run in connection with the maternity and child welfare centres. If the general practitioner or midwife undertakes the ante-natal care, the local authority has the power to pay for this, and in country districts, where it is impractical to provide clinics because of the distances, many county councils make arrangements for uninsured women to be examined at doctors' surgeries without charge.

Ante-natal clinics may be of two kinds: (i) the consultative clinic; (ii) the clinic for routine examination and for social and educational purposes. Although a consultative clinic may serve both purposes, this is not usual, especially in most urban districts, where the clinics are generally not consultative. Ante-natal clinics for routine examinations are provided by local authorities under their maternity and child welfare schemes. Provision for ante-natal examinations is also made by some voluntary organisations. In 1935 the proportion of expectant mothers attending ante-natal clinics in London was 73 per cent; in the county boroughs of England 63 per cent, but in the counties of England only 17 per cent. In Scotland as a whole the proportion was 35 per cent, and in Wales as a whole 36 per cent. In Scotland, it should be noted that under the Maternity Services (Scotland) Act 1937, already referred to, provision is made for at least three ante-natal medical examinations for women who come under the scheme. If the local authority's ante-natal clinics and medical staff are used for the purpose of these examinations, steps will be taken to secure that the ante-natal records are communicated to the attendant at confinement.

The main purpose of an ante-natal clinic is to watch over the normal woman's health during pregnancy and not to treat abnormalities, which are usually referred to the family doctor or to a consultative clinic or a hospital, although some clinics do provide treatment for minor ailments. Consultative clinics, at which the services of a specialist may be had, have been started by several local authorities, either in co-operation with an adjacent maternity hospital (e.g. in Newcastle-on-Tyne), or at a clinic set up for the purpose and served by specialists, as in Middlesex and certain towns in the north.

The well-organised ante-natal clinic undoubtedly does very good work. It makes provision for the nursing, educational and social side of pre-natal supervision as well as for regular examination, and arrangements can be made through the clinic for following up in the home and ascertaining the need for material help. The Report of the Departmental Committee and the Report on the Investigation into Maternal Mortality produced strikingly similar criticisms of the ante-natal clinics. Both reports emphasised the importance of close co-operation between the clinic and all persons in whose charge the woman may be during pregnancy and confinement. This view was strongly endorsed by the Report on the State of the Public Health 1933, which recommended that where possible the staff of the clinic should coincide with those responsible for the confinement.

Also many of the medical officers at the clinics seem out of touch with the actual practice of obstetrics, and there is a tendency to ignore physical disabilities not necessarily connected with the pregnancy. Another deficiency appears to be the lack of co-operation of the mother herself, which might be remedied by more effective following up on the part of health visitors. In the areas visited during the Investigation into Maternal Mortality (1937) it was found that the home visiting of expectant mothers varied very much, both in the number of women visited and in the number of visits paid to each woman. The percentage of first visits to total registered births varied from 5 to 48 in county boroughs and even more widely in county areas. This is partly due to the fact that the health visitors are generally fully occupied at the maternity and child welfare centres, and are also often expected to perform other functions such as that of school nurse.

The Report on an Investigation into Maternal Mortality particularly stressed the need for an extended provision of consultative clinics, or of alternative arrangements for securing treatment by gynæcological specialists. It is interesting to note that among the 770 maternal mortality cases in the areas investigated for the report, it was considered that in 443 cases careful supervision during pregnancy might have influenced the issue, yet in 39 cases ante-natal care had not been sought, and in 217 the supervision appears to have been inadequate.

The hospital ante-natal clinics provide both in- and out-patient treatment, and have specialist officers and facilities for special treatment. They are doing excellent work, but unfortunately, such clinics serve only a minority of patients.

Ante-Natal Care through the Midwife or Doctor

As indicated above, many local authorities, especially in rural areas, pay private doctors for the ante-natal care of expectant mothers who cannot afford it themselves; and, as will be shown when a national maternity service is discussed, a further development on these lines seems desirable. In Scotland, as already mentioned, provision for ante-natal supervision by a medical practitioner has been made through the 1937 Act. Local authorities have the obligation to pay the fee of a doctor called to the assistance of a midwife in cases of abnormality during pregnancy, but many midwives do not seem to be fully aware of this provision. Midwives themselves also give limited pre-natal advice and attention, either independently or as health visitors or district nurses.

The Report on an Investigation into Maternal Mortality (1937) found that ante-natal care by midwives was on the whole fairly good. Among the older midwives there was sometimes a lack of knowledge or up-to-date methods, but this should be remedied by the provision in the 1936 Act for refresher courses. The standard of midwifery among district nurses seemed to be rather superior to that of independent nurses. Ante-natal care by general practitioners was found to be in some cases of a high standard, but in other cases it is perfunctory.

Provision for Institutional Treatment

Local authorities provide beds for the diseases of pregnancy and for any pregnant woman who is badly in need of a rest and cannot otherwise obtain it. It is, however, necessary for far more beds to be set aside specifically for ante-natal cases. The Report on an Investigation into Maternal Mortality points out that successful treatment of many ante-natal cases depends on removal from worry or excitement. Therefore, beds in busy lying-in wards are unsuitable. Ante-natal cases are sometimes admitted to medical or surgical wards of general hospitals, but here they are not under the care of specialist staff. The lack of accommodation for ante-natal cases may discourage doctors from recommending admission of a patient as early as may be desirable.

Health Visiting

Health visiting is an important part of the maternity and child welfare service. The chief purpose of health visitors is to supervise by home visiting the health of expectant and nursing mothers and children under school age, and to act as Infant Life Protection Visitors supervising the conditions under which children are received for reward. Most of their work is done through the routine visiting of all notified births. They "follow up" cases and carry out the instructions of the doctors. The training and conditions of work of health visitors are considered in Chapter VI. The health visitors working in connection with the maternity and child welfare service do not carry out special instructions as, for instance, the tuberculosis nurses must do. They act far more independently and give general advice. In 1936, 193,173 expectant mothers were visited in England and Wales (31 per cent of births), and an average of three visits was paid to each case. In Scotland 28 per cent of births were covered, with an average of 2½ visits per case.

The Provision of Food for Expectant Mothers

The local authorities have power to provide milk or food during pregnancy or lactation. At present out of 419 maternity and child welfare authorities in England and Wales, 406 are supplying milk to expectant mothers and 406 to nursing mothers, either free or at less than cost price. In Scotland, out of the 55 maternity and child welfare authorities, 43 were supplying milk to expectant mothers in 1935. Some have made arrangements for meals. The exact extent to which necessitous mothers are getting milk is difficult to estimate, but the Ministry of Health has roughly estimated this to amount to 7,000,000 gallons a year in England and Wales. It is calculated, however, that if the 300,000 mothers who attend clinics were to receive 1 pint of milk a day for 6 months before and after child-birth the consumption would be approximately doubled. Actually only about half of the mothers in the country attend the centres, and it is impossible to know how much extra food and milk could with advantage be consumed by necessitous mothers outside. Various official and unofficial experiments show, however, that the milk and food consumption of these mothers would increase considerably if it were available free or at reduced price. This problem is referred to again in Chapter XI.

Experimental evidence of the effect of feeding on maternal mortality is available as a result of several schemes initiated by the National Birthday Trust and assisted by private donors and the Commissioner for the Special Areas. In 1934 the Rhondda Urban District Council improved its maternity services by such means as providing better ante-natal services, but the puerperal death rate continued to rise. When, in addition to these services, food was also distributed to some expectant mothers, the maternal mortality rate fell very appreciably.

In other areas, expectant mothers are receiving additional food under the schemes, and those in the Rhondda Valley additional services as well as food. The puerperal death rate among the 10,384 expectant mothers who received extra nutrition under the schemes from January 1, 1935, to July 30, 1937, was 1.64 per 1,000 total births, whereas among the 18,854 other cases in the same areas the puerperal death rate was 6.15. The still-birth and neo-natal death rate among the cases assisted in 1937 was nearly 50 per cent less than that among the other cases in the same area. Other factors such as failure to attend ante-natal clinics may explain a part, but certainly not the whole, of this difference.*

The evidence from these experiments is most striking; moreover, their conclusion that insufficient food leads to lowered vitality and consequent inability to bear the strain of child-birth seems logical and reasonable. The findings of the Report on an Investigation into Maternal Mortality are inconclusive on the subject of nutrition. The English report did not attempt a formal investigation of nutrition. However, the opinions of local people in the areas visited were taken. It appeared from this inquiry that malnutrition of pregnant women was rare, although unbalanced diets were common. The report states that "it would appear that the dietary of many mothers is inconsistent with that now recommended by physiologists as desirable for pregnant women." The Report on Maternal Mortality in Wales, however, concluded that there was evidence that many expectant mothers were not receiving an adequate diet, particularly in rural areas.

Institutional Provision for Maternity Cases

This is made by local authorities in maternity homes, or in municipal or voluntary general hospitals. Voluntary general hospitals also have beds available for maternity cases and there is a good deal of provision in privately-run homes.

The Local Government Act 1929, by transferring the Poor Law hospitals to the county and county borough councils, has greatly increased their opportunities to provide beds for maternity cases. In 1936 there were 4,680 beds in maternity wards in these institutions in England and Wales, 1,703 beds in other public maternity institutions and 2,243 beds provided for local authority cases in voluntary hospitals, making 8,626 in all, or 1 bed for every 72 notified births. The number of women admitted to these beds, or sent by local authorities to other institutions was 164,236, that is, 26½ per cent of all notified births, the proportion being much larger in big towns than in country districts. In 1934, in 20 of the county boroughs visited for the Investigation into Maternal Mortality (1937), the percentage of institutional confinements to registered births varied from about

---

* *Public Health.* November 1937.

5 to over 40. There is an increasing desire on the part of women to go into a hospital for their confinement, which raises the important question as to how far public provision should be made for this purpose. The opinion of the Departmental Committee was that hospital accommodation should be available for all abnormal cases and for cases where the home is unsuitable, but that otherwise the service of a competent midwife and, if necessary, a doctor, should be provided free of charge for every woman unable to afford the fees herself. To protect the public and to ensure that proper provision is made, privately-run maternity homes must be registered by the local supervising authorities under the Midwives and Maternity Homes Act, 1926.

In Scotland, there are now 359 maternity beds provided by local authorities under their schemes of maternity service and child welfare, while a further 355 beds are available in other local authority institutions. A considerable increase of institutional provision by local authorities has been approved, and further increases are under consideration. There are also over 630 maternity beds in voluntary institutions. In Scotland the county and larger burgh councils are responsible for the registration of maternity homes.

Apart from the actual shortage of beds in many areas, the maternity hospitals in Great Britain vary enormously; some, particularly the municipal hospitals, setting a high standard, while the organisation of others is open to criticism. Overcrowding is evident in some, and mothers may be sent home too soon because of over-booking, while the lack of accommodation for the various types of cases means that potentially infectious cases are not properly isolated. Although much has been done to modernise, improve and extend existing buildings, both in voluntary and municipal hospitals, there remain many cases in which the buildings are inadequate. In the future development of maternity accommodation by local authorities it seems desirable that maternity wards should as far as possible be in a separate block of a general hospital, and cases of infection should be provided for in a completely detached part of the building. With regard to organisation, the great evil to avoid in maternity hospitals is overcrowding, and for this reason patients should only be accepted up to 80 to 85 per cent of the total number of beds.

The Midwifery Service

The majority of confinements still take place at home under a variety of conditions, of which the most usual in England and Wales is that there is a midwife in charge who calls in a doctor if necessary. The midwifery service is now (1937) in a state of transition. It has been provided by midwives who carry on a private practice as a means of gaining a livelihood, and by the salaried nurses and midwives of district nursing associations and local authorities. The effect, however, of the Midwives Act 1936, which applies to England and Wales, and the Maternity Services (Scotland) Act 1937, will be to set up a midwifery service on more flexible lines and to create a whole-time salaried midwifery service under the administration of local authorities in many parts of Great Britain.

The profession of midwifery is regulated in England and Wales by the Midwives Act of 1902 and subsequent legislation, which provides that no woman can lawfully call herself a midwife unless certified by the Central Midwives Board set up to regulate the profession and to administer the Act. The Board consists of four medical practitioners, two persons appointed by the Lord President of the Council, and three nominated respectively by the

Association of County Councils, Queen's Institute for District Nursing and the Royal British Nurses Association. It regulates both the issue of certificates and the conditions of admission to the roll of midwives, and also the training and the conduct of the examinations. Local authorities were given the task of administering the 1902 Act as Supervising Authorities in their areas, but the Act did not accomplish all that was necessary or even intended. The "handy woman" still continued, and there was no arrangement for the paying of doctor's fees if the midwife, acting under the Act, summoned a doctor. These defects were remedied by the 1918 and 1926 Acts, under the first of which the supervising authority was made financially responsible for paying the fees of a doctor summoned by a midwife; while under the second no untrained woman might attend a woman in child-birth except under the direction of a doctor. In 1918 also local authorities were given power to subsidise or run midwifery services, but only about 90 availed themselves of the power.

Midwives in England and Wales can be trained at about 180 institutions recognised by the Central Midwives Board. On March 1, 1935, there were 58,964 names on the roll of the Central Midwives Board, but only about 15,885 of these were actually practising. About 6,250 were employed as salaried midwives, nearly all by voluntary bodies; the remaining 9,000 being in private practice. Some 40 per cent of those in private practice only took about 15 cases annually, which meant that the incomes of the others were being depressed by the competition of women who did not solely depend on their practice.

The Midwives Act 1936 should make an enormous difference, both in improving the economic position of the midwife and in providing a really adequate midwifery service, for under it the supervising authorities are arranging for the provision of a midwifery service staffed by full-time salaried midwives. Maternity nursing for doctors' cases is also provided for. Fees will be charged, but may be remitted wholly or partially by the local authorities, according to the patient's means. When an adequate service is established and the Minister is satisfied with it, he may by order make it an offence for any person not a midwife or a registered nurse to attend a woman in child-birth or during the ten days after confinement. This should at least save mothers from the ministrations of the "handy woman" and the untrained maternity nurse.

In Scotland, the practice of midwives is regulated by the Central Midwives Board for Scotland, set up under the Midwives (Scotland) Act 1915, and similar in constitution to the English Board. Seventeen training institutions have been approved by this body. The rules of the Central Midwives Board are in course of revision and will shortly require an extended period of training. 1,361 midwives gave notice during 1935 of their intention to practise, the average number of births attended by each such midwife during that year being only about 18.

The Maternity Services (Scotland) Act 1937 provides for the setting up of a domiciliary maternity service by the local authorities. The arrangements of the local authorities will, it is expected, make available to women who apply for the service, and who are to be confined in their own homes, the joint care of a medical practitioner and a certified midwife, and where necessary of an expert obstetrician. When a midwife has been booked for a case, she will make arrangements for the ante-natal examinations with the general practitioner, whom the mother has selected out of a list of practitioners who have accepted service under the scheme. The midwife will attend with her patient at the examinations. If the practitioner is of opinion that the confinement will be entirely normal, then he need not himself attend it. But the midwife must summon the practitioner if she needs medical advice or assistance during the confinement. The midwife will accompany the patient to the post-natal examination, which will be made by the general practitioner. There will be at least 3 ante-natal examinations, and at least one post-natal.

Provision will also be made for the services of an obstetrician to advise and assist in maternity cases wherever this is necessary and practicable. Local authorities may make provision for the services of midwives by engaging them on a salaried basis, by making arrangements with those in private practice, or by entering into agreements with voluntary organisations.

The whole question of the training of midwives has received much consideration, and there is general agreement that the ideal to be aimed at is that all midwives should eventually be drawn from the ranks of State registered nurses. It is to be hoped that the improved conditions that will result for midwives when the Acts of 1936 and 1937 are put into practice will make this easier. The British Medical Association have strongly recommended that the Central Midwives Board examination should include practical work, embracing the clinical examination of pregnant women, which seems most desirable. The curriculum for the training of midwives is under revision by the Central Midwives Board at the present time. An important section of the new English and Scottish Acts is that which provides for refresher courses. Practising midwives will henceforth have to attend courses of instruction arranged by the local authorities to enable them to keep up to date in their methods.

The special difficulty of providing an adequate midwifery service in rural areas which have not a sufficient number of births to occupy the whole time of a midwife will be met, since these areas will still be served by the district nurses of the nursing associations who are certified midwives, and local authorities will pay the associations a grant. In England, 69 authorities propose to provide the service by the direct employment of midwives, 38 by arrangements with voluntary associations and 58 by a combination of the two methods. It is to be hoped that under the new Acts the lack of co-ordination which at present exists between the midwife and the public health service will disappear, and that the midwife will keep in close touch with the local ante-natal clinics and other provisions for maternity and child welfare in her area. The adequacy of the new service will of course depend largely on the number and competence of the midwives engaged by the local authorities, on the conditions under which they work and on the willingness of the local authorities to remit fees in suitable cases. The Report on an Investigation into Maternal Mortality (1937) finds that it is of the greatest importance to the midwifery service that supervisors of midwives should perform their functions efficiently. They should make routine visits to midwives to see that a high standard of work is maintained, and to see that the records are carefully kept.

The General Practitioner

Local authorities must pay the fees of a doctor called in by a midwife for an emergency in connection with a confinement, but they have power to recover the fees from the patient. The extent to which many practitioners attend at confinements for a very small return must also be recognised. The question of the place of a practitioner in a complete National Maternity Service for England and Wales will be considered below. In Scotland, of course, provision will be made for the participation of the general practitioner in the new schemes which are being set up. It seems essential that the services of a doctor with special experience in obstetrics should be available free of cost for every woman who cannot afford the fees herself, both to examine her during pregnancy and during the post-natal period and to attend, if necessary, at her confinement. Again, the Scottish scheme will make provision for this. Doctors must still be present at any labour where an anæsthetic is required or asked for by the mother, except the administration of gas and air by a Minnett's or similar apparatus. Moreover, only those midwives who have received special instruction in the essentials of obstetric analgesia may use it. The patient must have been examined within a month of her confinement by a medical practitioner, who must have given the midwife a certificate that it may be used. A State certified midwife or a State registered nurse, or a senior medical student or a pupil midwife, must also be present at the confinement. This means that doctors will probably continue to be needed at a fair percentage of cases.

The opportunities of general practitioners in England and Wales to gain practical experience in midwifery have declined during recent years owing to the falling birth-rate, the increased number of confinements in institutions, and in England and Wales, the number of confinements undertaken by midwives. The resolution of the General Medical Council of December, 1933, insisting on a higher standard of training and greater experience in obstetric practice for medical students, will eventually help to modify this tendency. The Report on the Investigation into Maternal Mortality (1937) found that the practice in midwifery of certain general practitioners was limited to a few medical aid calls from a midwife. Only in the largest towns are there obstetric specialists in practice; in smaller towns a few general practitioners may take an active interest in midwifery and be called in to consultations by their colleagues.

The general practitioner is often called in to an emergency in the patient's home. He may have to deal with a critical situation without assistance, in unsuitable surroundings, which, in the words of the 1937 Report, would "challenge the skill of an obstetric specialist." It is clearly, therefore, of great importance that the best available obstetric skill should be obtained in response to medical aid calls by the midwife or the general practitioner. Hence, it is suggested that a system of emergency medical units should be set up to be ready to assist.

National Health Insurance

Maternity benefit under National Health Insurance is a money payment of £2 on the confinement of the wife (or in the case of a posthumous child, of the widow) of an insured man, or of a woman who is herself insured. In the case of a married woman who is herself insured the benefit is payable both in respect of her own and her husband's insurance. A married woman who is an employed contributor is also entitled to a double benefit if her husband is not insured, or if, though he is insured, the benefit is not payable from his insurance. The qualification for this benefit is 42 weeks of insurance and the payment of 42 weekly contributions. A married woman receiving the benefit from her own insurance is required to abstain from work during the 4 weeks after confinement.

A married woman is also entitled to claim maternity benefit for two years after the date of her marriage if she ceased to be insurably employed at that date. Some approved societies provide additional maternity benefits both for men and for women. This may increase the benefit to as much as £4.

There is a great deal of confusion about the right of those women who are themselves insured to claim "sickness benefit" when they are incapacitated for work by pregnancy. Some approved societies give the benefit without question. Others refer the applicant to the regional medical officer. Hardship is endured by those who have to make a special journey to the office of that official, and sometimes rather than do so they forego their rights. At the same time they are often debarred from drawing unemployment benefit. The adjudicating authorities of the Ministry of Labour are believed to regard the unemployed claimant as "not available for employment" during the last 8 weeks before confinement. The woman may, none the less, have a certificate from a doctor that she is fit for "light work." No control over the expenditure of maternity benefit is exercised by approved societies or by the public health authorities. Most of it is probably spent on the fees of the midwife and doctor, since no treatment is available from the panel doctor in respect of confinement.

The Royal Commission on National Health Insurance drew attention to the fact that in practically no other European system of health insurance is maternity benefit limited to cash payments. The Majority Report of the Commission, however, did not recommend the provision of maternity services within the existing framework of our insurance scheme, but considered that while the cash benefit should continue to be administered by the approved societies, medical, nursing and institutional services of all kinds provided in connection with pregnancy should be part of a medical service administered by the appropriate local authorities. On page 112 and in Chapter VII we consider the possibility of improving the National Health Insurance maternity benefit so as to ensure the provision of treatment as well as the payment of a cash benefit.

Home Helps

Local authorities have the power to provide home helps to do domestic work while the mother is incapacitated. About 50 of them make such provision, under very varying conditions. The highest standard is set by Birmingham, where a complete service of home helps is provided. The authorities employ about 40 helps, pay them 5s. a day when in work, but no retaining fee, and their hours are from 6 a.m. to 8 p.m. The charge to the family for the service of the helps is on a graduated scale according to income—1s. per day being the minimum charged. The mother may also obtain a help if she is incapacitated before the confinement, provided she is not suffering from an infectious disease. In other places, however, the wages offered are considerably below what is paid in Birmingham, and there are not nearly enough home helps. This provision has also been adopted by a number of local authorities in Scotland, notably in Glasgow, where the system is similar to that in Birmingham.

Post-Natal Care

Post-natal care has so far received very little attention in the maternity services. The Ministry of Health has allowed local authorities in a few cases to set up municipal clinics under the Public Health Acts, where women could be examined a few weeks after child-birth and given advice on all matters connected with child-bearing. But the usual arrangement is for post-natal work to be undertaken under the Maternity & Child Welfare Acts, which limit its scope and clientele. Post-natal inspection and supervision of some kind is available at about 1,000 Maternity and Child Welfare Centres.

The Report of the Departmental Committee shows that while it is difficult to obtain exact statistics as to the extent of maternal morbidity in this country, the evidence available suggests that a large number of women still suffer from disabilities following child-birth, and that far more attention should be given to early diagnosis and adequate treatment. Although the Factories Act 1937 and the Public Health Act 1936 make it an offence to employ women in factories for four weeks after child-birth, most women go about their ordinary work 10 days or a fortnight afterwards, imagining that any discomfiture is inevitable and will eventually disappear. In the opinion of the committee, the necessary facilities should be available for every woman to be medically examined from two to six weeks after child-birth, for this would enable any disability or diseases to be detected and treated at an early stage. The Report on an Investigation into Maternal Mortality (1937) goes further than this, recommending that there should be two post-natal examinations; the first at the end of the lying-in period, and the second from six to eight weeks after the confinement. The Scottish Maternity Services Act of 1937 requires the medical examination of women accepting the service at least once after the expiry of one month after child-birth.

Post-natal work should be developed so as to enable all women, and not only those who have just given birth to a child, to obtain advice and instruction on matters concerning their health and hygiene. Some birth control clinics are at present provided by voluntary effort and by local authorities. At those provided by local authorities advice is only given where it is needed on grounds of health. Twenty-six local authorities in England and Wales have 28 gynæcological clinics of the nature outlined in the State of Public Health 1933*: "a clinic where mothers needing advice on physical and health matters, both of nature and nurture, might well be assisted. Such an institution under adequate and skilled medical supervision could receive minor gynæcological cases, deal with some forms of post-natal after-care, accept responsibility for counselling mothers of subnormal physique or mentality, give advice on the practice of contraceptive methods when medically needed, and act as a clearing house for appropriate treatment of one sort or another by hospital or medical practitioner. . . . Clinics for the purposes here described need not be elaborately or expensively equipped as the necessary apparatus, furnishing and outfit is of the simplest character."

It is essential that advice about birth control should be available to those who want it, since it is often necessary on medical grounds. At the same time most mothers and prospective mothers will not accept conditions under which undesired pregnancies may occur. Attempts to prevent the fall in the birth-rate by restricting knowledge about birth control are doomed to failure. Moreover, the lack of knowledge about birth control undoubtedly leads to a high maternal death rate due to criminal abortion. This general supervision of maternal health is work that general practitioners might undertake if they considered themselves to have adequate knowledge and if conditions of service were improved and National Health Insurance extended to cover dependants as proposed in Chapter VII. Until, however, general practitioners are given sufficient financial reward for undertaking it, the work must be done by local authorities.

---

* Annual Report of the Chief Medical Officer of Health.

The necessary developments to improve on the existing post-natal provision in England and Wales seem to be (i) the provision of more maternity beds by the local authorities; (ii) more home helps; (iii) the provision of the services of a doctor to make the post-natal examinations, and the opportunity to refer cases to a gynæcological expert when necessary; (iv) the provision of more post-natal clinics at which treatment for post-natal diseases would be available and instruction given about birth control.

INFANT WELFARE

Provisions for the health of the mother do, of course, affect that of the infant, but certain services are primarily for the infant's health. Most important in this respect are the infant welfare centres and the work of health visitors. The centres, which are in fact the maternity and child welfare centres, concentrate on the education of the mother in the feeding and general care of her infant, but they also give medical advice. They are staffed by health visitors and a doctor, who is now usually on the staff of a medical officer of health. The doctor sees the infants the first time they are brought to the clinic, and subsequently on the advice of the health visitors. Treatment for minor ailments is given, but for other than this the mothers are referred to their own doctor or a specialised clinic or hospital.

The provision of milk and other food free or at a reduced price both to the mother and infant is an important part of the activities of these centres.

At the end of 1936 there were 2,550 infant welfare centres in England and Wales maintained by local authorities and 818 by voluntary associations. In England about 60.5 per cent of the children born were brought to them. In Wales the figure was 69.2 per cent. The centres will accept children up to 5 years, but in some cases there is a tendency to separate the older children from the infants by forming so-called "Toddlers' Clinics." This is dealt with more fully in the next section—The Health of the Pre-School Child. The number of maternity and child welfare centres in Scotland in 1936 was 254.

There is no doubt that some infant welfare centres are doing very good work, but that in some cases the doctors do not possess the necessary specialised knowledge. Inadequate facilities for treatment outside, and the reluctance of the mothers to consult the family doctor, also impede the work of the centres, while the overcrowding at many of them means that the medical examination may be largely perfunctory and the health visitors are often too harassed to give the necessary individual attention.

The work of health visitors in the homes is also a most important part of the Infant Welfare Service. The care of the infant during the first fourteen days of life is usually undertaken by the doctor or midwife. Since the Notification of Births Act 1915, when the notification of births to the Medical Officer of Health within 36 hours became obligatory, systematic home visiting has become a real possibility. In 1936 more than ninety-five per cent of the children born in England and Wales during the year were visited at least once by a health visitor, while regular visits were paid to a rather smaller proportion. The importance of the health visitors' work in the homes as well as at the centre lies in the instruction they give the mothers in infant hygiene.

It has already been observed that the mortality rate for very young babies has not appreciably fallen since the beginning of the century. A large percentage of these deaths is due to premature birth and congenital causes, and a reduction in the mortality from these causes is chiefly to be hoped for from an improved midwifery service and better ante-natal care, but also in the provision of more adequate medical advice and treatment for very young infants. The extension of National Health Insurance to cover dependants is a necessary move in this direction, and also the staffing of infant welfare centres by doctors who have real knowledge and experience of infant hygiene. At present when treatment which the centre does not provide is needed, the doctor in charge of the centre usually tries to get the mother to consult her doctor, but fear of the cost often makes her reluctant to do this.

There seems no doubt that infant welfare centres will continue to play an important part in the health services, even if the role of the general practitioner is considerably extended. In some cases the pleasant social atmosphere of the centres encourages the mothers to come when they might be unwilling to consult a doctor. The centres also afford good opportunity for diagnosing defects at an early stage, although treatment must necessarily be given elsewhere. Increased facilities for treatment should be provided by the local authorities and should take the form of more institutional provision for children and an improvement in the domiciliary nursing services. At present some authorities provide nursing for certain specified diseases, but it should also be available for the minor disorders of infancy, for in this way much serious illness and mortality could be prevented.

Mention should be made of the movement for paying welfare centres, where the middle-class mother can obtain specialised advice about her infant. Three clubs have been started in London for this purpose and are attended chiefly by the mothers of the professional classes.

Provision for the Unmarried Mother and her Child

In theory, the unmarried mother and her child are as much entitled to benefit from the maternity and child welfare services as anyone else, and although in the early days of the movement public opinion often prevented them from receiving the full benefit, under the pressure of the Ministry of Health and the Department of Health for Scotland the position has very much improved. The mortality rate of illegitimate infants was 60 per cent above that of legitimate infants in 1935. In 1921-25 it was 92 per cent above and in 1913, 105 per cent above. Local authorities are also given powers to meet the specially hard case of the unmarried mother and her child, and the importance of their duties under the Maternity and Child Welfare Act in this respect was pointed out to them in a circular issued by the Local Government Board in 1919. Very few local authorities make direct provision for homes and hostels where mother and child can be maintained, but they co-operate with and give grants to voluntary societies who are doing excellent work. There are now rather more than 100 homes in Great Britain for unmarried mothers and their children.

Propaganda and Education

The work of educating the nation in the need for caring for its mothers and young children and instructing mothers in the elements of hygiene and healthy living fell in the first place on voluntary organisations, which started the first clinics. They continue to do a great deal of this important work. For example, the National Council for Maternity and Child Welfare maintains a permanent exhibition at Carnegie House and organises travelling exhibitions. It has promoted the production of instructive films for use in maternity and child welfare centres. Other bodies organise competitions such as the National Parentcraft Competition among the maternity and child welfare centres affiliated to the Association of Maternity and Child Welfare Centres. The National Baby Week Council organises its Baby Week and Baby Sunday to promote interest in infant welfare. The local authorities make use of some of the propaganda material supplied by these bodies and also adopt their own methods to educate their constituents to use the services provided by them and others. In the autumn of 1937 the central departments themselves launched a campaign for promoting the process of education.

IMPROVEMENTS

A National Maternity Service for England and Wales

The Maternity and Child Welfare provisions in England and Wales have been discussed, and in considering the gaps it is desirable to bear in mind both the ideal which must be aimed at and the best way of organising our services to attain it. The ideal has been well expressed by Dame Janet Campbell when she said: "A complete maternity service is one which secures to every woman such assistance as is needed to ensure for her a safe journey through pregnancy, a well-conducted labour with a minimum of danger to herself and her child, careful nursing and adequate post-natal supervision."

Until continuous supervision by a doctor, or a doctor and midwife, is available for every maternity case, and adequate institutional provision is available for special cases, this ideal will not be attained.

The most promising lines of development seem to be those suggested by the Departmental Committee's Report on Maternal Mortality and Morbidity in the statement that "*provided* medical ante-natal and post-natal supervision is secured, attendance on normal cases should be the function of the midwife, and with certain important exceptions, institutional provision should be mainly for abnormal cases." The committee advocated the provision of a trained midwife in every child-birth that takes place at home, whether a doctor is in attendance or not, and considered that her duties should be to keep the patient under her supervision during pregnancy, labour and the puerperium, though the actual ante- and post-natal examinations would be conducted by a doctor either at a clinic, or (and this will probably be the case in rural districts) at a surgery. In actual practice it seems that mothers would be encouraged to engage a midwife at an early stage of pregnancy. The midwife would then "book" the case, inform the local administrative body and arrange for the medical examinations, of which for normal cases it is considered that 3 are necessary before child-birth and one about 4 to 6 weeks afterwards. The midwife would attend the patient during labour and for 14 days afterwards, making use of her present powers to send for the doctor if any abnormality occurs, and throughout she would act in close co-operation with the clinic and the doctor, instruct the patient in the general hygiene of pregnancy, and inform her as to all facilities that are available to her through the maternity service. In all necessitous cases the fees of the midwife would, of course, be remitted by the local authorities.

The place of the medical practitioner in the scheme is also extremely important, for although the midwife would be responsible for most normal confinements in the home, the ante-natal supervision of each case should be undertaken by a doctor. In the opinion of the committee, the aim should be not to encourage a special branch of practitioners for this purpose (for it would be difficult to provide enough of them), but to raise the standard of midwifery knowledge and practice in the whole profession. Each practitioner wishing to do so would, of course, have formally to notify the local authority that he intended to "accept service under the scheme," and adequate machinery would have to be set up through which unsatisfactory service could be investigated. The mother would, if possible, be allowed to choose her doctor, whose duty it would be broadly, in the words of the committee "to give the prescribed attendance to every eligible woman who expresses her wish for him to do so, to inform the local administrative body that he has 'booked' her, and to make the required reports." He would, of course, make the ante-natal examinations and then advise as to whether the case was normal enough to be conducted by the midwife in the home, or as to whether further specialist ante-natal examinations or treatment were necessary. He would also attend the patient when called in by the midwife or by the patient herself, and conduct the post-natal examination. If the dependants of insured persons were brought into the National Health Insurance system as we propose, and the scheme outlined by the Departmental Committee put into operation, the medical supervision of a pregnant or nursing woman by her general practitioner would be secured, for the prospective mother would be under the general supervision of her panel doctor and he would be responsible for the ante-natal and post-natal examinations. We consider this question further in Chapter VII.

As to the method of payment under the scheme, the committee's suggestion that an inclusive fee be paid to the doctor by the local authority for each case seems the best arrangement. Nor would the scheme conflict in any way with a revised National Health Insurance scheme, whereby maternity benefit included treatment benefit, since the local authority would collect its charges from the local insurance committees, and not from the individual, when the individual had a right to maternity benefit.

The relation of the doctor's work to that of the ante-natal clinics needs defining. If the suggested scheme developed on the lines indicated by the committee, the ante-natal clinics might cease to be "routine clinics," for routine work would be done by the doctor at his surgery or in the home, and become places where the practitioner and specialist can hold consultations. It would be valuable if the general practitioners might have the opportunity to use these clinics, with their facilities for examinations.

The question of the woman who wishes to be attended by a doctor under conditions not postulated in the scheme was also considered by the committee, who recommended that any woman who wishes to be attended by a doctor at the confinement should be free to arrange for this at her own expense, but could still avail herself of the midwife provided.

That the services of a second doctor should also be provided to act as anæsthetist in necessary cases also seems desirable.

The question whether post-natal treatment could be made a charge on the scheme was also considered by the departmental committee, and it was agreed that it should be provided only in cases noted by the practitioner at the specified post-natal examination. This treatment would probably be secured by arrangement with existing agencies, such as the gynæcological departments of general hospitals.

The scheme of the British Medical Association* agrees in principle with that of the committee. Both maintain that the service of the midwife suffices for normal confinements but that some of the needed ante-natal supervision can only be adequately undertaken by a doctor. There are, however, good reasons for supporting the view that the midwife should continue to conduct the normal case, provided that a doctor is available in case of emergency and that he conducts the ante-natal examination. The midwives are obtaining good results. The Annual Report of the Queen's Institute for District Nursing (1936) shows that in 1935 the midwives connected with the Institute attended 65,538 maternity cases in England and Wales with a maternal mortality rate of 2.6 per thousand. This includes the "emergency" cases where the midwife has had to call in a doctor. This rate certainly compares very favourably with the general rate for England and Wales, which was 3.94 in that year.

Ideally it would probably be desirable that both a doctor and a midwife should attend every confinement, but in England and Wales it will be extremely difficult to achieve this, owing to the other demands on the doctor's time. It is nevertheless very desirable that general practitioners should become more proficient in dealing with maternity cases by acquiring more experience of them.

The Consultant Service

The provision of adequate facilities for specialist advice and help is most necessary if the maternity service is to be complete. At present local authorities have power to pay fees in certain cases, but it is doubtful whether they make very much use of this power. The Committee suggested that adequate facilities for consultation should be available whenever the doctor notifies the local administrative body that he considers a specialist's opinion to be desirable. The case should then be referred to a specialist department in the general hospital—"special arrangements for retrospective approval being made in cases of emergency." The Report on an Investigation into Maternal Mortality also strongly emphasised the need for the establishment of an adequate service of obstetric consultants under the medical officer of health. The consultants would assist medical practitioners when in doubt or difficulty, conduct consultative clinics, and supervise in-patient treatment of maternity patients for whom the local authority assumes responsibility. They would also be responsible for the emergency domiciliary service of the area, and assist the medical officer of health with confidential investigations into the circumstances associated with each maternal death in the area.

---

* Memorandum outlining a National Maternity Service Scheme for England and Wales—as approved by the Annual Representative Meeting of the Association, 1929.

Institutional Provision

More institutional provision is needed for abnormal cases and for cases where the home conditions are unsuitable for a confinement. More provision for "lying in" during pregnancy is also needed. To make hospital provision a complete charge on the maternity scheme would, of course, be fairly costly, so the present system of payment according to means may have to be maintained. In many areas prospective mothers prefer institutional treatment, partly because of the disturbance that a confinement entails in the home. Their demand and their willingness to pay for the service in some cases necessitated its provision.

Emergency Medical Units

It is undoubtedly true that in emergencies, particularly when the patient is suffering from shock, there is a grave risk in attempting to convey her to hospital. If emergency medical units (or "flying squads") were available to go to the patient in her home, the risk of transportation could be avoided. Emergency units consisting of two medical officers and two nurses have worked successfully in the county of Lanarkshire. Emergency units would be very valuable as an adjunct to general hospitals for dealing with all emergencies, and not only those of child-birth.

The Scottish Maternity Services

In many places in the preceding account of the maternity services we have made special reference to the maternity services in Scotland as planned under the Maternity Services (Scotland) Act 1937. This service will not be unlike that proposed for England and Wales by the Departmental Committee on Maternal Mortality and Morbidity. A local authority in Scotland must secure that there are available for every woman who requires it, medical examination and treatment in pregnancy (including at least three examinations), medical supervision during child birth, and from time to time thereafter during a period of not less than the lying-in period, medical examination at least once after the expiry of one month after child-birth, the services of an anæsthetist when recommended by the medical practitioner, and the services of an obstetrician to advise and assist when necessary. Unless the woman has a panel doctor she is entitled to select her medical practitioner from those who have accepted service under the scheme. The practitioner will not be expected to attend the woman in pregnancy unless he has reason to believe that the labour will not be entirely normal.

The aim of the scheme is to secure the medical supervision of every confinement and the close co-operation of the doctors and the midwives. The local authorities' clinics are to be brought into the scheme, but the problem of co-ordination in this field is not so great as in England, for in the more sparsely populated parts of Scotland clinics have not been developed. An inclusive charge of about £1 10s. 0d. is proposed (to be remitted in case of need) for these services. The local authorities are making their own financial arrangements with the midwives and medical practitioners. Administratively the service is under the control of the county councils and the councils of the larger burghs, but the Department of Health is to exercise a fairly stringent supervision. The local authorities, for example, may combine to run some of the services and the Department may require their combination if it considers it desirable in some circumstances. Provision is also made for creating a salaried service of midwives, the compulsory retirement of some midwives, and co-operation with local authorities.

It is not difficult to see that when this scheme is put into effect Scotland will have a far more comprehensive maternity service, run on lines considered most practical by the leading authorities, than exists in most parts of England and Wales. Admittedly, owing to geographical circumstances, the problems to be faced in Scotland are sometimes different from those south of the Border, but they are not so different as to suggest that England and Wales can afford to lag behind Scotland in planning a comprehensive service combining, as Scotland has done, the services of the midwife, the general practitioner and the specialist.

The Method of Financing a National Maternity Scheme

At present, as has already been shown, the two services of public health and health insurance are entirely separately administered with regard to maternity and child welfare. The insured mother, or the wife of an insured man, receives a lump sum down which she may spend as she pleases, while the local authorities provide certain maternity services, some of which are free—for example, the maternity and child welfare services—and others such as the home help service, to which she is expected to contribute according to her means. The insurance money is therefore in no way "related to health."

As to the best method of financing a national maternity scheme as outlined above, various suggestions have been put forward. The recommendation of the Royal Commission on National Health Insurance was that £1 should be deducted from the maternity benefit towards the local authorities' expenditure, and that the remaining £1 or more should be paid to the insured person to meet incidental expenses. This view was endorsed by the Report of the Committee on the Scottish Health Services, who also recommended that a further £1 per confinement should be paid out of the contributions proposed for medical benefit for dependants. From women outside the insured classes who wished to participate in the scheme the authorities would recover £2 (£1 10s. 0d. has, in fact, been adopted in Scotland as the suggested rate) wherever they could afford such a sum, and a smaller amount according to their ability to pay. Certainly an insurance scheme is better than a recovery of cost system, since the latter deters mothers from using the scheme. Probably the full advantage, therefore, will not be obtained from the new Midwives Act and the Maternity Services (Scotland) Act, since both include provision for recovery of cost. The possibility of an extension of National Health Insurance to provide more adequate maternity benefit is discussed in Chapter VII.

Co-ordination of Administration

The administration of the maternity and child welfare services, as can be seen from the above account, is in the hands of voluntary organisations and various local authorities. Many of the voluntary bodies are co-ordinated through the National Council for Maternity and Child Welfare. The Queen's Institute of District Nursing partially co-ordinates the work of district nursing associations carrying out midwifery services. (See Chapter VI.)

In Scotland only the county councils and the councils of the larger burghs administer all the services concerned in the protection of the life and health of the pregnant woman and nursing mother and the welfare of her children. But in England and Wales, as can be seen from Appendix I, the administration of the various services may be undertaken by different classes of authorities in the same area.

There are 188 supervising authorities administering the Midwives Act 1936, and the other Acts relating to midwives in England and Wales, while there are 419 welfare authorities (before the coming into force of the Public Health Act 1936, maternity and child welfare authorities). Any welfare authority, however, under the Local Government Act 1929, which employs a full-time medical officer of health, may apply to the Minister to be made a supervising authority.* The Public Health Act 1936 has put the administration of the Maternity and Child Welfare Act 1918 and the Notification of Births Acts 1907 and 1915 under the same authority, thus securing that there is no confusion between those authorities concerned in health visiting and those concerned in maternity and child welfare work.

Thus numerous bodies, both voluntary and public, are concerned in the administration of the maternity and child welfare services. Sometimes the existing areas of administration are too small, and administrative confusion lessens efficiency and promotes wastefulness. We shall have more to say on this in Chapter XVI. Moreover, the administration of these services is not linked to the allied services. This is particularly true in the case of the school medical service, although an education authority may apply to the Minister to be made a welfare authority in England and Wales. (In Scotland only the counties and the four cities are education authorities.) In London, for example, the L.C.C. is the education authority, and the metropolitan boroughs administer the Maternity and Child Welfare Act. As a result of this the health of the pre-school child is the responsibility of no one authority, but merely of the authority whose institution the child attends if it attends one at all. Thus, if it goes to a nursery class, the school medical officer is responsible; if it goes to an infant welfare centre or a toddler's clinic the welfare authority is responsible.

Co-operation in the Maternity and Child Welfare Services

It is vitally important that the maternity services should be properly co-ordinated; for emergencies develop very quickly in the course of labour. All the agents concerned—the clinics, the doctor, the midwife and the specialist—must work as a team for the safety of the prospective mother and the health of her child. Co-operation between the maternity hospitals, the general hospitals and the doctors must be maintained. Without this co-operation and co-ordination a domiciliary service must inevitably be superseded by an institutional service where co-ordination can be secured within one building.

At the same time, the importance of the co-operation with the services of the prospective and nursing mother herself cannot be over-estimated. If she is informed what services are available she must make efforts to use them. She must co-operate with her advisers in carrying out their instructions on hygiene and the conduct of her life during pregnancy.

The Maternity and Child Welfare Services and Social Conditions

To legislators, administrators and industrialists belongs the task of seeing that pregnant and nursing mothers have suitable environmental conditions under which to work and live. All the efforts of the doctors may be nullified if administrators, producers and retailers do not secure a clean milk supply for mothers and infants. The best maternity services are useless if the pregnant woman is overstrained in the course of her work at a factory, or even in her daily domestic work. In Great Britain few crèches are provided where nursing mothers can put their babies during working hours. The legislation controlling the employment of either the pregnant woman or the nursing mother is limited to provisions in the Factories Act 1937 and the Public Health Act 1936, making it an offence knowingly to employ any woman in a factory during the four weeks following child-birth. Any insured woman who is receiving maternity benefit must also abstain from working during the four weeks following her confinement. The British Government has failed to ratify the Draft Convention of the International Labour Office concerning the employment of women before and after child-birth. This was drawn up in 1919 and binds the countries that ratify it to prohibit the employment of women for six weeks before and after child-birth, and to make provision for their maintenance. The British Government has maintained that it is impossible to make this provision under the present system of National Health Insurance without giving what would amount to a benefit reserved especially for insured women or extending a similar benefit to all insured persons, which would, they considered, be too expensive. The proposals we have put forward in Chapter VI concerning the provision of an improved maternity benefit do not make provision for the payment of a benefit sufficient to provide for the maintenance of the mother and her child for three months. Nevertheless, the matter is one that deserves further study, particularly in the light of the findings of the Investigation into Maternal Mortality, setting out the relationship between the maternal mortality rate and the number of women in employment.

---

* Supervising authorities were county councils and county borough councils under the Midwives Act 1902, but these councils were given a right to delegate their powers which was withdrawn in 1918. However, authorities which had obtained these powers were not compelled to relinquish them. Sanitary authorities in 1918 were made responsible for maternity and child welfare, while the actual authorities administering it now have been given their powers by administrative arrangements under various Acts.

Again, bad housing conditions may create extremely unfavourable circumstances for giving birth to and rearing a child. The relationship between bad housing conditions and infant mortality is brought out in Chapter II. In fact, bad social conditions have helped to mould the existing maternity service. For example, institutional provision for maternity cases is partly the outcome of bad housing conditions. The provision of food and milk at maternity and child welfare clinics to prevent the malnutrition of expectant and nursing mothers is often the outcome of low wages and unemployment. But what are not generally regarded as bad social conditions may also help to shape the maternity services. Thus, small houses and flats will probably accentuate the demand for institutional provision for maternity cases.

THE HEALTH OF THE PRE-SCHOOL CHILD

Introduction

Some school provision for children under five has long been made, either voluntarily or as part of the elementary school system. However, in the first decade of the twentieth century it was questioned whether the training given to small children in these establishments was suitable to their ages, and two official inquiries substantiated these doubts. At the same time several voluntary nursery schools were opened, including that at Deptford, founded by Margaret Macmillan. The effect on the health and general welfare of the children at the Deptford school led to other schools being modelled on similar lines. Voluntary organisations and local authorities were also in pre-war years opening crèches, clinics and day-nurseries. The aim of the latter was primarily to enable mothers who were at work to leave their children in suitable surroundings.

The legislative enactments which marked the growth in the provision of care for children under five are the same as those which enabled the Maternity and Child Welfare Movement to develop. They were the Notification of Births (Extension) Act 1915, and the Maternity and Child Welfare Act 1918. Specific powers to enable education authorities to set up, or contribute towards the cost of, nursery schools were given by the Education Act 1918 (re-enacted in the Education Act 1921) and the Education (Scotland) Act 1918.

Local education authorities are now enabled to make provision for small children either in nursery schools from the age of two, or in ordinary infant departments from the age of three. Nursery schools did not, however, increase rapidly in number after 1918, although 50 per cent grants were available to local authorities in England and Wales for both capital and current expenditure; grants of 50 per cent were also available to voluntary organisations to enable them to meet their current expenditure. The standards laid down for nursery schools by the Board of Education regulations were considered high. The capital cost was heavy and the economy campaigns of 1920 and 1931 discouraged new ventures.

We have considered the problem of the health of the pre-school child primarily from a health standpoint, and we have not gone exhaustively into the educational problems involved, difficult as it is to separate the two. We recognise the need for more nursery schools for children from working-class homes who often lack opportunities for play and are not supervised by trained persons during critical years, and also for all children of small families who do not have sufficient contacts with children of their own age; we also recognise that the provision of nursery schools for all children in the age-group 1-5 would be an extremely expensive measure, compared with other important social improvements that are probably equally desirable.

The Health of the Pre-School Children

The mortality rate in the age-group 1-5 is comparatively low. But the excessive morbidity of this age-group has called attention in recent years to a distinct gap in the medical services of the country. 16 per cent of the children entering public elementary schools in England and Wales in 1936 were found to have defects requiring treatment. While babies can be taken to maternity and child welfare centres, and children of school age come under the school medical service, there is no comprehensive scheme of medical supervision for the child under school age. Since dependants are not covered by National Health Insurance, the mother who cannot afford the fees of a private practitioner may find difficulty in obtaining medical attention for her small children. These children are particularly liable to catch infectious diseases such as measles and whooping-cough. While in London and some large towns they are cared for at fever hospitals during the acute stage of the illness, the hospitals cannot follow up these cases, which may later develop serious complications. The problem of the medical supervision of the pre-school child is urgent and has been given a conspicuous place in government health reports in recent years. However, the remedy under the existing arrangements appears to lie chiefly with the local authorities, and their attention has been called to it by a circular of the Ministry of Health dated May 29, 1936. An extension of the medical benefit of National Health Insurance to the dependants of insured persons would, of course, be one of the most suitable ways of securing the adequate medical supervision of children in this age group.

There is also the problem of accidents among small children. Accidents account for 10½ per cent of all deaths between 2 and 5 against 3 per cent at all ages. The death rate from accidents at ages 2-5 has fallen by 33 per cent since 1913; that is, from 570 per million living to 383 per million living in 1935. But mortality as a whole fell by 56 per cent in the same period, and thus accidents now loom larger amongst the causes of death. They must also account for a large amount of disability and ill-health, though this cannot be so easily measured. The provision of nursery schools and nursery classes in urban areas will obviously help to prevent accidents and to train children to take normal precautionary measures at an early age.

There were 2,268,000 children aged 1-5 years in England and Wales in 1935, and 320,400 in Scotland, in 1936. The various agencies dealing with this age-group will next be considered.

Maternity and Child Welfare Centres

An account has already been given of the maternity and child welfare centres. Many of the centres are so fully occupied attending to the babies that they have no time to deal with the older infants. Also many mothers cease to think it necessary to take their children after they are one year old. This conviction is strengthened by the fact that the difficulty of carrying them to the centre then becomes noticeable.

Day Nurseries

There are over 100 day nurseries in England and Wales, and most of these are run by voluntary bodies. They accommodate about 3,550 children. In Scotland about 1,800 children are accommodated in day nurseries, "toddlers' " playgrounds, etc., provided or assisted by local authorities. Here children from one month to five years can be left during the day. In a few day nurseries teaching similar to that given in nursery schools is provided for children of 2-5. But generally day nurseries are staffed with nurses and not nursery school teachers. Since 1919, day nurseries have been incorporated in local authorities' schemes for maternity and child welfare work, and are therefore under the Ministry of Health and the Department of Health for Scotland. Three meals are usually provided. The children are bathed, made to rest, played with and otherwise cared for. Day nurseries are visited regularly by doctors. A small charge is generally made for the use of the day nursery.

"Toddlers' " clinics and playgrounds have been established by a number of local authorities and voluntary organisations. They are similar to maternity and child welfare centres, but they cater specially for older children, and fewer medical inspections are carried out in them. Their main advantage is to enable the children to secure extra nourishment. But a mother with a young child who is attending the maternity and child welfare centre may find it hard to spare the additional time required to go to the clinic, which is generally held in the same building on a different day.

Nursery Schools

In England and Wales there were in 1937 91 recognised nursery schools with accommodation for approximately 6,915 children. In Scotland there were, on July 31, 1936, 947 children enrolled in 25 nursery schools.

Nursery schools aim at providing a healthy and orderly life for small children and enabling them to learn how to conduct themselves and mix with others. They are obviously most urgently needed in crowded industrial areas where many mothers are working during the day, and where housing conditions are particularly bad. They are visited frequently by doctors, and a nurse attends, possibly every day, to treat minor ailments. Dinners and milk, towards the cost of which the pupils contribute, are provided for all the children. These are usually nutritious meals such as the children would not get at home. There are regular rests on canvas beds in the afternoons. Where possible, games, singing and other activities are carried on in the open air. In order for a nursery school to qualify for a grant, the head teacher must be a certified teacher.

Many of the new nursery schools are in attractive rooms with big windows, light walls, and small furniture and fittings specially designed for the children. According to the Chief Medical Officer of the Board of Education, a nursery school of semi-permanent type for 80 children can be built for about £3,000. The running cost should be about £15-£17 per child per annum.

In the Special Areas it is particularly necessary to have some nursery schools. But local authorities do not wish to increase the burdens on the rates, and voluntary agencies have many claims on their funds. The Nursery Schools Committee of the Save the Children Fund, has been able, with financial assistance from the Commissioners of the Special Areas, to establish 10 emergency nursery schools and assist several others.

School Attendance and Nursery Classes

On March 31, 1937, there were 158,413 children aged 3-5 in England and Wales, and 2,929 in Scotland in 1936, attending public elementary schools, and grants were payable to local education authorities in respect of these children. Since the earlier years of this century, when it became clear that the provisions for young children in elementary schools was unsatisfactory, many improvements have been made in the infant departments. In some areas, notably in Manchester and Leicester, nursery classes have been formed in an attempt to bring the advantages of the nursery school method into the infant departments of elementary schools. In such classes facilities for "open air" work have been provided, beds for resting on have been introduced, and attempts have been made to make the premises more suitable. In nursery classes the children come under the school medical service.

Nursery classes do not have the advantages of a nursery school. Medical attention is more frequent in a nursery school. Also a nursery school has a longer day, beginning probably at 8.30 a.m. and going on till 5 p.m. Dinner is provided at nursery schools so that there is no journey home in the middle of the day. Children of two are admitted to nursery schools, but nursery classes do not usually accept children under three. Finally, a nursery school is a unit in itself, whereas a nursery class, being part of a large school, has to fit in with the arrangements made for older children.

From this comparison it is clear that the nursery school can provide a more secure and well-ordered environment for small children than can a nursery class. It is particularly important to avoid the double journey home and to school; this is less tiring for the child, and makes it possible to plan a more suitable time-table of activities. The only obvious advantage of a nursery class over a nursery school is that it is less expensive both to establish and to maintain.

Conclusions

In spite of these many attacks on the problem of the pre-school child, it is clear that a vast number of small children are still neglected. Nursery schools, for example, which have attracted a certain amount of publicity, are dealing only with a small fraction of the pre-school child population (just over 6,000 out of 1,721,000 in England and Wales).

In a joint circular issued by the Board of Education and the Ministry of Health in 1929 it is pointed out that before reaching school age hundreds of thousands of children "have no help, direction or succour from public sources however much they need it," and that "it is grossly uneconomic to allow the health and stamina of infants to deteriorate till five years old and then to spend large sums of money in trying to cure them between the ages of five and fifteen." The policy of the Board of Education is only to extend nursery schools for the use of children whose physical conditions and surroundings necessitate the continuous medical care and the feeding which are obtainable there. Undoubtedly, however, considerable benefit could be secured if they were even further extended, for they have important social and educational functions to fulfil. They relieve the working class mother of some of the worry and work entailed in looking after small children, while they afford her an opportunity of learning how best to care for her children. Their extension would not break up the unity of the family, but would relieve it of some of the strains to which it is subjected, particularly where home conditions are necessarily far from ideal. They should not enable the parents to escape responsibility for their children, but make that responsibility more apparent and easier to fulfil. More will be said about this problem of the family in Chapter XIII in relation to the Peckham experiment. The nursery school, particularly in an age of small families, also affords the child an opportunity of learning how to mix in a community.

The cost of an extension of nursery schools is high, but a large proportion of this cost is in the provision of buildings. With a falling population the falling into disuse of a number of school buildings will set free accommodation which in some cases might be made suitable for nursery schools and nursery classes.

Administratively, under the present system, the supervision of children between the ages of 2-5 falls under both the central departments concerned with education and those concerned with health. Thus day nurseries are the concern of the Ministry of Health, and nursery schools of the Board of Education. This dualism extends to the committees of the local authorities and, as we have explained in the last section, different classes of authority in the same area may even be responsible for the maternity and child welfare services and the educational services respectively.

It is vital that some medical provision should be made for children between 1-5. An extension of National Health Insurance to cover the dependants of insured persons would secure this. Alternatively, more extensive provision in maternity and child welfare centres for these children would be an improvement. But even if an extension of National Health Insurance were secured there would still be room for nursery schools in the educational system, since they provide essential care and supervision for young children. Since, however, the children would have a family doctor, the cost of the medical side of the nursery schools would be diminished, although some medical supervision would have to be maintained.

THE SCHOOL MEDICAL SERVICE

History

The school medical service was the logical development of compulsory school attendance, but over thirty years elapsed before the State recognised that education was being partly wasted upon a large number of children whose physical condition prevented them from getting full benefit from their education. This obvious fact, combined with rapidly increasing concern about the state of public health, which was emphasised by the evidence of the low physical standard of recruits for the army during the Boer War, led to the establishment of a school medical service at the beginning of the twentieth century.

In 1906 the Education (Provision of Meals) Act was passed, making it possible for local education authorities to provide meals in schools and to give meals free to necessitous children. This was followed in 1907 by the Education (Administrative Provisions) Act, providing for the medical inspection of school children. In Scotland the school health service has been evolved from the powers conferred on the school boards by the Education (Scotland) Act 1908 to conduct the medical inspection and supervision of school children and to provide necessitous children with meals and clothes. For some years after the medical inspection had been introduced, the child who was found at the inspection to need treatment was referred to the family doctor or taken to a voluntary hospital. But the majority of parents of elementary school children could not afford to pay the fees of a private practitioner, and also the private practitioner was not equipped to deal with all varieties of ailments from bad eyesight to dental caries. The voluntary hospitals were not always able or willing to treat the large number of children whose need had been revealed at the inspections. Thus it was necessary, if the treatment was to be obtained at all, for the local education authorities to establish clinics of their own, and to make arrangements to send children to the local hospitals. The necessity of having means of treatment under the control of the local education authorities has led to the development of the present extensive school medical service. The Children Act 1908, as amended by the Children and Young Persons Act 1932 and consolidated in Part I of the Children and Young Persons Act 1933, gives local education authorities a chance to see that children who are in obvious need of medical treatment receive it, since they can prosecute the parents of a child for neglect if the child is not properly cared for. One of the most valuable consequences of the creation of the school medical service has been that it provides a unique field for research and statistical investigation into diseases prevalent among children.

The Administration and Scope of the School Medical Service

In England and Wales the Minister of Health is responsible for the school medical service, but his authority is delegated to the Board of Education. Co-ordination is secured through the appointment of the same chief medical officer to the Board of Education and to the Ministry. Locally the statutory education committees of the various authorities concerned (see Appendix I) are responsible for the service. Again co-operation and co-ordination between the school medical service and the other health services is generally secured by the appointment of the M.O.H. as school medical officer. This arrangement is recommended to local authorities by the Ministry, but in some large county boroughs it has not been adopted. The efficiency of the school medical service is often impaired by the delegation of its administrative supervision to a sub-committee of the local education committee, which cannot act without the consent of the full committee. This sometimes leads to it becoming uninterested in the service it is administering. In Scotland the Department of Health retains its power of supervision over the school medical service, and does not delegate it to the Scottish Education Department. The education authorities in Scotland are the city councils of Edinburgh, Glasgow, Aberdeen and Dundee, and the 31 county councils. These are also local authorities for the major public health functions and the medical officer of health of the council is in charge of the public health and the school health service.

The basis of the school medical service in England and Wales is the compulsory medical inspection of all children in elementary schools. This occurs at least three times during their school career. Local authorities must also provide for the medical inspection of children in secondary schools, for which they are specially responsible, and they may arrange for it in other schools. They need not, however, as they must do in elementary schools, provide for the medical treatment of children under their care. In Scotland local education authorities must provide for the medical inspection of children in schools under their supervision, but they are only required to provide treatment for children whose parents cannot afford to obtain it by other means. Closely bound up with the school medical service are the teaching of hygiene and cleanliness, physical training, and the provision of meals and milk. Local education authorities are also responsible for the education in special schools of blind, deaf, epileptic and mentally deficient children.

The Medical Inspection

Children in elementary schools in England and Wales are medically inspected at least once in their first year at school, and then at the ages of 8 and 12. Often there are various additional examinations and inspections. School nurses also carry out examinations. Thus in the London County Council's schools every child is examined every term of its school life by a nurse.

In 1936, in England and Wales, over 3 million routine and special inspections were made; this means that about 60 per cent of children on the register were inspected. In addition over 2 million re-examinations were made.

In Scotland, all school entrants are medically examined and a special vision test is usually made at the age of 7. The other routine medical examinations take place at ages

9 and 13, with an additional examination for those remaining at school after the age of 14 years. In 1936, 400,880 routine and special inspections were made, in addition to 84,136 re-examinations; the number on the register of schools under inspection was 808,110. In Edinburgh, an experimental arrangement is being tested of an annual classroom survey of all children in the primary and intermediate schools, in substitution for the routine examination of the age 9 group.

Treatment

In England and Wales the total number of defects treated among elementary school children in 1936 was nearly 3 million. All the 315 local education authorities provide some form of treatment. The ailments for which treatment is provided vary considerably in different areas. Treatment is given either in local education authorities' own clinics, of which there were 2,125 in 1936, or by arrangement with public or voluntary hospitals.

Number of local authorities providing treatment for the following ailments in 1936:

Minor ailments	312
Dental	314
Ophthalmic	315
Nose and throat, operative non-operative	292
Ringworm by X-ray	204
Orthopædic and postural	254
Artificial light	111

In Scotland the number of children who received treatment in 1936 through the local education authorities was 293,250, some for more than one defect. The 35 authorities administering the school medical service maintained approximately 221 clinics, and about 70 hospitals had working arrangements with local education authorities. School clinics were held in 12 of these.

	No. of local education authorities providing treatment
Minor ailments	35
Defective vision	35
Dental defects	35
Adenoids and tonsils	31
Ringworm (X-ray or drug) ..	25
Orthopædic	21

Staff of the School Medical Service

In England and Wales there were 1,458 school medical officers in 1936; of these 275 were whole-time officers, 863 were public health and school officers, and 320 were part-time officers.* There were 907 dentists, of whom 404 were whole-time. 6,014 nurses were doing work for the education authorities; 1,619 were full-time; 2,020 full-time in school and public health work, and 2,375 part-time, of whom 2,281 were district nurses; the nursing staff of the education authorities is equivalent to about 2,500 whole-time nurses.

---

* The total amount of time given by the Medical Officers to school work is equivalent to 706 whole-time officers. There is therefore approximately one medical officer to 6,725 school children in average attendance.

In Scotland in 1936 there were 43 whole-time and 89 part-time school medical officers. In addition 50 local practitioners were employed on a part-time basis. There were also connected with the service about 60 specialists, most of whom were part-time officers. There were 51 whole-time and 35 part-time dentists. Approximately 650 of the nurses engaged in statutory duties devote part of their time to school health, while approximately 150 are engaged whole-time in the school health service.

Special Schools

In England and Wales in 1935-36 there was accommodation for 58,369 children in 612 special schools. 247 of these schools were residential and 365 were day schools. Some are run by voluntary bodies and some by the local authorities.

In Scotland there were 10,406 children in special schools on July 31, 1936; there were 11 residential schools, 39 day schools and 44 special classes in ordinary schools.

While provision for blind and deaf children is comparatively satisfactory, more provision is needed for mentally deficient, rheumatic, delicate and epileptic children. These schools are dealt with in greater detail in Chapter IX, where the provision for persons suffering from these particular defects is discussed.

Medical Services in Junior Instruction Centres

Local education authorities have the power to submit to the Minister of Health schemes for providing medical services to boys and girls attending junior instruction centres. The scheme suggested in a memorandum on this subject issued in 1936 is that the school medical officer should visit junior instruction centres frequently and inspect all juveniles who have attended the centre for not less than 1 week. Local education authorities may arrange for treatment to be given to these juveniles through their school medical service facilities. The juveniles are not to be compelled to submit to medical inspection. The cost of treatment is to be recovered from the parent except where genuine inability to pay is established. Milk can also be made available to junior instruction centres for juveniles showing symptoms of sub-normal nutrition. The L.C.C. in 1935 induced some of its pupils at day continuation schools and at evening institutes to submit themselves to medical examination.

Voluntary Work

A considerable amount of assistance to the school medical service is rendered by voluntary workers. In London and some other large towns there is a school care committee attached to every public elementary school. Twelve organisers are paid by the L.C.C. and there are about 5,000 voluntary workers who receive a short preliminary training before they undertake any responsible duties. These care committees act as agents for the Special Services Sub-committee of the Education Committee of the London County Council for the purpose of supervising the general welfare of school children, and they are entrusted with the responsible task of recommending necessitous children for free meals and assessing the capacity of parents to pay the nominal sums charged by the council for medical treatment. They also perform a valuable service in "following up" medical treatment and putting parents and children in touch with voluntary associations (such as the Invalid Children's Aid Association) which can give them special kinds of help. The Invalid Children's Aid Association, the Children's Country Holiday Fund and the National Society for the Prevention of Cruelty to Children and other societies also aid the work of the school medical services. For example, the National Society for the Prevention of Cruelty to Children acts as agent for the London County Council in the administration of the law relating to the punishment of adults for cruelty or neglect of children.

Gaps in the School Medical Service

On all sides there is need for expansion in the school medical service. Economy is undoubtedly cramping the development of a service in which the foundations have been well laid.

One of the most striking deficiencies is in the provision for dental treatment. Less than three-quarters of the school children in England and Wales are dentally inspected annually. The Board of Education have stated that they consider the minimum standard to be attained is one dentist for every 5,000 children in urban areas and for every 4,000 in rural areas. In England and Wales there was in 1935 the equivalent of one full-time dentist to every 7,600 children. At the present time in Scotland the ratio varies. In 10 areas, there is one whole-time school dentist (or equivalent part-time service) for 6,000 children or less; in 11 areas the ratio is one dentist for 6,000 to 10,000 children; in 9 areas one dentist for 10,000 to 15,000 children; and in 4 areas, there is only one dentist for over 15,000 children. Another major deficiency which is particularly commented on in 'Education in 1935' and also in the 1935 Report of the Department of Health for Scotland is in the provision for treating crippling and postural defects in children. Some areas have no orthopædic hospital schools, while many have inadequate facilities for remedial exercise. Greater attention should be paid to prevention by such methods as improved seating in schools, improved general school amenities, and physical training.

Open-air schools have been one of the most successful ventures of the school medical service. In England and Wales there are 149 such schools with accommodation for 11,019 day and 3,934 residential pupils. But there are many industrial areas where no such schools exist, although it is well known that open air schools provide a most effective type of treatment for certain conditions common among school children. More institutional accommodation is needed for children suffering or convalescent from the effects of acute rheumatism. If careful treatment is not available, acute rheumatism may lead to heart disease. Other gaps in the school medical service are pointed out in Circular 1444, the Administrative Programme for Educational Development, such as the need for obtaining the part-time services of aural specialists for ear diseases which may result in deafness. Again more provision is necessary for the sub-normal child, whether "difficult" or of low-grade intelligence.

The adequacy of the school medical service varies very greatly between the areas of different local education authorities. While some authorities, such as the larger boroughs, make use of recognised treatments such as artificial light, there are other authorities with the bare minimum of a medical service. Research is revealing new methods of treating rheumatism and of educating mental defectives, but the local education authorities are slow to make use of these. In order to achieve the best results there is need for greater co-ordination between clinics, hospitals and private practitioners. The school medical service has revealed a mass of neglected troubles. It has only encroached to a small extent on treatment given by private practitioners. Most local education authorities inform by letter the parents of children needing treatment, and this has resulted in an increased number of parents taking their children to a general practitioner.

The law relating to school medical treatment contained in the Education (Scotland) Act 1913 is more restrictive than the English law. In Scotland treatment may only be given to children when parents are "unable, by reason of poverty or ill-health, to supply it," and then only if the child is unable to take advantage of its education, and if no help is forthcoming from voluntary agencies. As the standard of "poverty" varies from area to area, so does the extent of treatment available to school children vary. In addition to the above restrictions, the local education authority is obliged to summon the parent of a child needing treatment, and only if satisfied as to the parents' poverty or ill-health is the authority allowed to give treatment. This complicated procedure gives rise to delay and administrative difficulties. Fortunately, however, education authorities in Scotland generally have tended to put a wide interpretation on the statutory provisions.

The medical staff of the service in both England and Scotland is often recruited from young doctors who are seeking ultimately to become medical officers of health. Some of them may at first know little of children's diseases, and might with advantage be supervised by specialists in these diseases. These specialists could be employed by the local authorities or by groups of the smaller authorities. Further, an increase in the number of home visitors and trained nurses employed in the service is desirable. These are frequently the most vital link in the whole organisation.

Provision for the Normal Child

The Chief Medical Officer of the Board of Education was able to make the claim in 1933 that "certain morbid conditions have been substantially reduced. Anæmia in girls (chlorosis) has almost vanished. Ringworm is disappearing. Blindness is being prevented. The verminous child does not expect admission to school. The malnourished child now constitutes about 1 per cent of the children." The question which arises from a study of the school medical service is whether enough is being done on the positive side for the normal healthy child. Is the child being made sufficiently robust and capable of resisting disease? The positive measures under the school medical service for promoting health consist of provision of meals and milk in schools, the teaching of physical training and games, and instruction in hygiene.

During 1935 a new method of classification for nutrition of children was adopted in England and Wales. The children were classified in four groups: of the 1,687,331 children examined in routine inspections, 14.6 per cent were classified "excellent," 74.1 per cent "normal," 10.6 per cent "slightly subnormal," and 0.7 per cent "bad." These figures conceal the fact that in some schools in poor areas the percentage may be much higher than the average. In Chapter XI the validity of the methods employed in calculating malnutrition is discussed and the view is put forward that there is more malnutrition in certain senses of the word than these figures disclose.

The Milk in Schools Scheme receives a grant from the Exchequer. Children and young persons in grant-earning schools and courses may obtain one-third pint of milk at the reduced price of ½d. In England and Wales, in March 1937, 2,670,000 children and young persons had this daily ration, and in March 1937, 299,000 in Scotland, the majority paying ½d. for it. This means that less than 50 per cent of the school population are getting milk at a reduced price. The numbers getting free "medical milk" are small. (See Chapter XI.)

Local education authorities in England and Wales have the power, but not the duty, to provide meals for children attending elementary schools who are unable, by reason of lack of food, to take full advantage of the education. Meals and milk are supplied free to necessitous children, but if the parents can afford it they are expected to pay the whole or part of the cost. Many schools also provide regular meals for payment, through a canteen.

In Scotland the law regarding free meals and milk is more restrictive. The education authorities have the duty of providing meals when the child is unable to take advantage of the education provided owing to lack of food, if the parent is unable, through poverty or ill-health, to make sufficient provision. The Report of the Committee on Scottish Health Services recommends that this restriction to necessitous children be abolished. Further, the law in Scotland makes it difficult to provide meals, otherwise than for full payment, unless the child is actually showing signs of want of food. The report therefore advocates that the law should be altered so that there may be no doubt respecting the preventive nature of the provision of meals. The question of improving the nutrition of the school population is further discussed in Chapter XI.

One of the main defects in our educational system is to be found in the inadequate provision for physical recreation. At the end of 1936 only 161 out of 315 local education authorities in England and Wales had appointed organisers of physical training. In elementary schools physical training is taught by teachers who also teach other subjects. Teachers who pass through the ordinary training schools and are going to teach in elementary schools are required to devote some time to physical training. It is only to be expected from this system that some physical training classes in elementary schools are run on old-fashioned "school drill" lines. The new physical education policy of the Board of Education and the Scottish Education Department, initiated in January 1936, is discussed in Chapter XII.

The provision of adequate organised physical recreation is particularly necessary in secondary schools when the hours worked may from some points of view be regarded as long. The problem of how to avoid excessive mental strain, which sometimes occurs in secondary schools, where pressure of work is often great, might be partially solved by the introduction of more physical recreation. In their chapter on the School Health Service the Committee on Scottish Health Services say: "We consider it essential that, if the schools are to play their part in improving the standard of the national health and in producing the best type of citizen, the methods and curriculum in the upper departments should be revised, and that a new balance should be struck between physical education, hand and eye training, and bookwork." This quotation comes towards the end of a very interesting discussion on the measures to be taken for the promotion of positive health. A further recommendation made by this committee is that for children over twelve there should be definite health instruction given in class. This is already done to a small extent, but it should be possible to make such instruction more general by incorporating it in the courses on general science. The problems connected with health education are discussed in greater detail in Chapter XIII. But we must make the point here that the school medical service should be closely integrated with the educational service. With the growing importance of physical education this integration will become increasingly significant.

All education authorities have powers to hold week-end and holiday camps. This is beneficial to the health of the children and also enables them to receive an extra medical examination, since they are always examined before they go. Similarly, voluntary organisations generally hold an examination of their members before they attend camps.

Relation of the School Medical to Other Services

Children who come under the supervision of the school medical service may have had no previous medical supervision. Moreover, while they are under the supervision of the school service they may not necessarily have a family doctor. Both these factors impair the efficiency of the service. The improvement of the institutional provision for the pre-school child and the infant has already been discussed. But neither these measures nor the improvement of the school health service can be an adequate substitute for the institution of an efficient panel doctor service for the dependants of insured persons and others. This would enable many children to receive treatment which their parents now fail to secure for them owing to the expense involved. But it would not detract from the necessity for an efficient school service, since the work of the general practitioner is complementary to, and not in competition with, that of the school doctor, provided proper contact between the two is maintained. Moreover, the school doctor remains inevitably in a more strategic position for detecting early signs of illness and deficiencies than any panel doctor is likely to be in for many years. Further, medical supervision of physical education and the teaching of hygiene, and of the environmental conditions in schools, will always be required. When the Government's proposals to extend the medical benefit of National Health Insurance to persons who have attained the school-leaving age, but not the age of 16, have been implemented, the great majority of those leaving school will be entitled to receive the services of a panel doctor instead of being dependent on their own and their parents' financial resources for medical services, as they are now. Thus, the boys and girls entering industry will not be deprived, as they have frequently been, of medical care for a number of years. In Chapter VII the problems of the extension of medical benefit to the dependants of insured persons and others are discussed.

V. THE MEDICAL PROFESSION

The Organisation of the Medical Profession: History—The General Council of Medical Education and Registration of the United Kingdom and the Medical Act 1858—Licensing Authorities—The British Medical Association—Other Professional Organisations—**Medical Training—Analysis of the Work and the Status of the Medical Practitioner:** Introduction —Numbers of Registered Medical Practitioners—Powers and Duties of Registered Medical Practitioners—**The General Practitioner:** Types of General Practitioner—Medical Partnerships and Assistantships—Remuneration—The General Practitioner's Relation to National Health Insurance—Contract Practice—Dispensaries (Free and Provident)—Doctors' Clubs—Public Medical Services—Insurance Against Doctors' Bills—**Public Service:** Doctors Employed by Local Authorities—Doctors Employed by Government Departments—The Services—**Specialists and Consultants—Medical Practice and the Health Services.**

This chapter considers the internal organisation of the profession, its relationship to the public, the manner in which its members are trained and the methods by which they are paid. These subjects are dealt with primarily from the standpoint of the profession. Thus we consider here the relationship of the doctor to the National Health Insurance system, but in Chapter VII we discuss the insured person's relationship to the system and to the medical profession. In some cases it has been impossible to separate the professional aspect and what might be termed the "consumer" or user aspect. Thus we have described contract practice in this chapter and only referred to it in passing in Chapter VII. In the last section—Medical Practice and the Health Services—we have dealt with the fundamental question of the relationships between the general practitioners and the rest of the medical profession and between the general practitioner and the public.

THE ORGANISATION OF THE MEDICAL PROFESSION

History

(*a*) *England.* Medicine, like all learning in the middle ages, was closely linked to the Church. It was generally studied by men who passed through the arts course at the universities and these were rewarded, as clerks, with ecclesiastical benefices or other offices. As the Church forbade "clerics" shedding blood, surgery was not studied by clerks, and consequently not at the universities. The surgeons were recognised as a separate "mystery." Later, the physicians were much influenced by Renaissance learning, and Greek literature changed the course of medical history. Linacre and five others secured Letters Patent for the Royal College of Physicians in 1518, and its privileges were confirmed by an Act in 1522. The Act provided that no person except a graduate of Oxford or Cambridge should practise medicine unless he had been examined and approved by the College. Licensing powers were possessed also by the ecclesiastical authorities. The surgeons were little affected by the new learning, and began to lose their power and prestige. They united with their inferior but powerful rivals, the Barbers, to form the Barber-Surgeons Guild, although the practice of the arts of barbers and surgeons was to remain distinct. In the eighteenth century the College of Physicians became a decadent and exclusive corporation. Nor did the universities, which throughout the eighteenth century were even more lethargic, provide trained men. The result was that the apothecaries, who originated as a species of grocer and by 1617 had secured a separate Charter for the Society of Apothecaries, rose to fill the gap. Under an Act of 1542 they had obtained the right to prescribe, which was afterwards upheld by the House of Lords. In 1722 they secured the passing of a Bill which gave the Society the power of supervision over the London Apothecaries, and in 1748 they were empowered to appoint a Board of Examiners.

The surgeons, like the apothecaries, made considerable strides in the eighteenth century. In 1745 an Act severed the Barbers Company from the Surgeons Company. In 1778 a surgeon was knighted. Finally, in 1796, the Company came to an end, and in 1800 was founded the Royal College of Surgeons of London, which in 1843 became the Royal College of Surgeons of England.

(*b*) *Scotland.* In Scotland the history of the relations between the different parts of the profession is similar. The Guild of Barbers in Scotland is mentioned as early as 1451. Finally, in 1505, the Guild of Barbers and Surgeons obtained a Seal of Cause from the Edinburgh Town Council. Subsequently, their privileges were frequently confirmed by the Town Council and by the Scottish Parliaments. There was always a distinction in the Guild between the Barbers and the Surgeons. In 1670, however, they were by an Act of the Scottish Parliament amalgamated with the Surgeons-Apothecaries, but later the Apothecaries gained the protection of the Royal College of Physicians, and the Barbers, engaged in the profitable trade of wig-making, separated from the Surgeons. At length, in 1778, the Royal College of Surgeons of the City of Edinburgh was given a separate Charter. At an early period the profession interested itself in encouraging teaching and the study of anatomy. The latter gained it an evil reputation as a result of the activities of the resurrectionists and "body-snatchers."

The Royal College of Physicians of Edinburgh obtained a Charter as early as 1681, by the efforts of Sir Robert Sibbald, of other eminent physicians and of the Duke of York, and despite the opposition of the Surgeons and the Town Council. As early as 1599 the Faculty of Physicians and Surgeons of Glasgow had received a Charter and become a licensing body. Throughout the seventeenth and eighteenth centuries the Scottish universities gained steadily in their reputation as centres of medical and surgical teaching, and their work became linked to that of the great voluntary hospitals which were founded in the eighteenth century. As a result, most of the medical teaching and research work in Great Britain in the eighteenth century and in the early part of the nineteenth century was being done in Edinburgh, Glasgow and Aberdeen. It was, in fact, not until well on into the nineteenth century that England had any medical school comparable to that of Edinburgh.

(*c*) *The Reform Movement.* In the early nineteenth century in England, the medical profession was a hierarchy with the physicians at the top, and below them "the three inferior grades of surgeons, apothecaries and even druggists." These divisions were mainly due to social distinctions and not to specialism. There were about 18 authorities in the United Kingdom who could give a licence to practice, but often enough their licences only extended to a limited territorial area. At the same time chemists and druggists were clamouring for the right to prescribe. Consequently, conditions were chaotic. The drive for reform came in the main from the "surgeon-apothecaries." The practice grew up for men to qualify as apothecary *and* surgeon. These men became known as *general* practitioners. They sought to defend themselves against the pretensions of the physician above and the druggist below.

An Act of 1815 gave the Society of Apothecaries the right to examine all apothecaries in England and Wales. No one was to be examined without having served five years apprenticeship, and the society did yeoman service as an examining body. Mainly as a result of this Act a system of medical education was evolved, mostly conducted by practitioners in private medical schools, although at least four London hospitals had arrangements which later developed into medical schools. The Society provided the nation with a large body of well-educated general practitioners. But this development only aggravated the position, for these men clamoured for equality with other branches of the profession. They organised themselves into societies like the National Association of General Practitioners, and in 1832 the Provincial Medical and Surgical Association, which became in 1856 the British Medical Association, was founded at Worcester. These societies demanded the sweeping away of the old licensing authorities and a thorough overhaul of the profession. There followed a bitter agitation, and two Parliamentary Select Committees dealt with the problem.

The General Council of Medical Education and Registration of the United Kingdom and the Medical Act 1858

The General Medical Council, the G.M.C., was created by the Medical Act of 1858. At first the Act was regarded as an interim measure and the reformers continued to press for a far greater measure of reform. But the Council gradually established itself, and without any apparent revolution, moulded the profession into an organic whole, while it left the older bodies, subject to its rulings, to do the work they had previously been doing. Almost accidentally, in fact, the healthy rivalry and individualism of the different educational institutions have been preserved while the chaotic conditions, partly based on social distinctions of the early nineteenth century, have disappeared.

The G.M.C. consists of 39 members. Nine of these are appointed by the medical corporations of the United Kingdom and the Irish Free State, five by the Crown on the advice of the Privy Council,* eighteen by the universities which have medical faculties, five are elected as "direct representatives" of the whole body of practitioners for England, and one for Scotland. A seventh "direct representative" is nominated by the Government of Northern Ireland. The nominees of the corporations and the "direct representatives" must be registered practitioners, but nothing prevents the rest being laymen. In fact, there is only one layman on the Council, and the first was appointed in 1926. The Council's offices are in London and there are branch offices in Edinburgh and Dublin. The G.M.C. has three principal functions. First, it keeps the Medical Register, that is, it places on the official list the names of those persons, and only of those persons, who after an adequate professional training have passed the prescribed examinations, and it removes from the list the name of any practitioner who after due inquiry has proved himself unworthy of a professional status. Further, the Council visits and inspects the medical examinations of the universities and licensing bodies and makes recommendations relative to the scope and contents of the medical curriculum. And as a third duty the Council provides for the publication of the British Pharmacopœia.

---

* Three registered dental practitioners are added for the exercise of the G.M.C.'s functions under the Dentists Acts (see p. 181).

The Irish Free State has now a Medical Council, but persons qualifying in the Free State may register with it or with the G.M.C. or with both bodies. The degrees of certain Dominion, Indian, colonial, and foreign universities enable a person to be registered in the British Medical Register. This right depends on whether reciprocity in respect of medical practice is accorded by the country concerned and whether the teaching and examinations are considered adequate.

The G.M.C. controls the standard of medical education by its power to represent to the Privy Council that a licensing authority should have its licence revoked because its teaching and its examinations are not sufficient, and the Council would take the same step were any licensing body to attempt to impose any particular theory of medicine or surgery. The G.M.C. may require information to discover these points and may appoint inspectors and visitors to the various authorities. In fact, it has never had to use its power of requesting the Privy Council to revoke the powers of a licensing authority. The G.M.C. has, however, ceased to accept the degrees of some Indian universities since it considered their teaching inadequate. It has no power to impose on the licensing bodies rules relating to the medical curriculum or examinations, but it passes resolutions and makes recommendations and, if any of these resolutions or recommendations were ignored by the licensing bodies, it would be open to the Council to make representations to the Privy Council which, if it thought fit, might order that the qualifications obtained from such bodies should not be registrable.

The G.M.C. acts as a judicial authority, since it has power to remove a name from the Medical Register. Most licensing authorities also have power to withdraw their medical qualification, and no name once removed by this means can be restored to the Register until the licensing authority has restored the qualification.

The Medical Act lays down the reasons for which a name may be erased from the Register. It provides that if any person has been found guilty of a felony or misdemeanour or "after due inquiry" of "infamous conduct in a professional respect," then his name can be erased. But no action may be taken against any person "on the ground of his having adopted any theory of medicine or surgery."

The G.M.C. has evolved a procedure of its own in conducting these cases. It summons before it a practitioner, who has been convicted in a court of law of a serious offence, and the gravity of the offence in relation to professional conduct is considered before it directs the removal of a practitioner's name from the Register. On the conviction of a doctor for any offence, the Council receives a report from the police. In trivial cases it merely records conviction. In other cases, such as drunkenness when in charge of a car or attending a patient, the G.M.C. generally issues a warning and does not take further action except on a further offence. Adultery with a patient or a member of a patient's family the G.M.C. has almost always held to be a breach of professional ethics which justifies erasure of the offender's name from the Register. In other cases the commission of "infamous conduct in a professional respect" is generally due to the breach of Warning Notices issued to the profession. These Warning Notices are not issued until a number of cases have come before the Council. In June 1923, a series of offences were catalogued, which might be punished by erasure of a name from the Register. The G.M.C. does not initiate proceedings, and a case has to be brought before it by a complainant in a prescribed manner. The case is then referred to the Penal Cases Committee, which consists of five members, with the judicial assessor, who is a barrister, and the G.M.C.'s solicitor. If a *prima facie* case is made out, the matter is referred to the full session of the G.M.C. Even then the G.M.C. may suspend pronouncement of its decision from one disciplinary session to another, which gives the offender time to mend his ways. The inquiry is conducted with all legal formality and the accused may have legal representation. No appeal lies to the Courts, for in the words of Lord Justice Bowen, "provided due inquiry has been made by the Council, the jurisdiction of the domestic tribunal which has been clothed by the legislature with the duty of discipline in respect of a great profession must be left untouched by the Courts of Law."

Controversies have arisen over the G.M.C.'s refusal to allow advertisements, over the prohibition of the employment of an unqualified man as an assistant by a registered medical practitioner and over the prohibition of the association in practice of a registered man with unqualified persons. The best known Press campaign developed over the Axham case. Dr. Axham's name had been removed from the Register because he gave anæsthetics for Sir Herbert Barker, thereby "covering" an unregistered practitioner. The danger from allowing associations of this kind is held to be that it may suggest to the public that an unqualified practitioner is qualified; and that in the event of a patient's death the registered practitioner may sign a death certificate, with the result that no inquest is held although the patient has been treated by an unqualified person.

The Medical Act does not forbid unqualified practice, although clause 40 provides penalties for anyone who "wilfully and falsely" pretends to be registered. The Apothecaries' Act 1815, which prescribes penalties for any person who though unlicensed "practices as an apothecary," also remains in force, but the decisions of the Courts have modified it. The registered practitioner alone, however, can recover damages in any Court of Law for medical or surgical services. Nor are medical certificates which are required for any purpose under the Act of 1858, or any subsequent Act, valid unless they are given by a registered practitioner. No physician's, surgeon's or any other medical appointment under the State or local authorities, may be held by an unregistered practitioner. Similarly, the National Health Insurance Act of 1911 laid down that only registered practitioners should be panel doctors. The Dangerous Drugs Act of 1920 is probably the most drastic recent legislation, since it lays down that only registered practitioners can legally possess certain drugs which are necessary to medical practice. These two Acts and the Venereal Diseases Act, which prohibits practice by an unqualified man in relation to these diseases, have helped to eradicate the petty medicine man of the large towns and to limit the activities of the prescribing chemists. The unqualified practitioner, however, continues to exist and has some attraction for persons in all ranks of life who are convinced that they can get better results by unorthodox methods. The medical case against "unqualified" practice is, in principle, that it cannot be prudent or free from risk to accept treatment of any form until the patient has been thoroughly examined so as to establish a diagnosis, and that the minimum training enabling anyone to carry out such an examination and diagnosis is the five years' medical curriculum.

Licensing Authorities

The licensing authorities remained after the passing of the Medical Act and still perform their work as examining and teaching bodies. Others have come into existence with the growth of the new universities. All these authorities, except Oxford, Cambridge and Durham Universities, and the four Scottish Universities, can exercise disciplinary control over the profession by depriving a practitioner of his medical qualification. There are 24 British licensing authorities, including the Conjoint Board in England formed by the Royal College of Physicians of London and the Royal College of Surgeons of England; the Conjoint Board in Scotland formed by the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh and the Royal Faculty of Physicians and Surgeons (Glasgow); and the Conjoint Board formed by the Royal College of Physicians of Ireland and the Royal College of Surgeons in Ireland. Apart from these constituent members of the Conjoint Boards, there are two other medical corporations which are licensing authorities—the Society of Apothecaries in London and the Apothecaries' Hall of Ireland. Some of these corporations take no part in teaching work. All but one award higher degrees which are much sought after. Thus the Royal College of Surgeons in England awards its Fellowships after an examination. Some of these corporations have their own standards of professional conduct which they impose on their members. For example, no Fellow of the Royal College of Physicians may sue for his fees or engage in any partnership. It is also held to be undesirable for any fellow, member, of licentiate of the Royal College of Physicians to contribute articles on professional subjects to journals professing to supply medical knowledge to the general public.

The British Medical Association

While the General Medical Council discharges the statutory duties already defined, and the universities and licensing authorities deal with educational examinations, the British Medical Association and one or two other very much smaller organisations are concerned with the general interests of the profession and the relation of these to public opinion and to the statutory health authorities The B.M.A., founded at Worcester in 1832, originally as an organisation of the "surgeon-apothecaries," took its present name in 1856. Since then it has grown in strength and now represents the majority of the profession in Great Britain and the Dominions. There are now nearly 37,000 members of the Association scattered throughout the Empire and even beyond it.

Constitution

The strength of the B.M.A. is partly due to its constitution, framed in 1902, and partly to the able permanent officials who have served it. It is practically a federation of local medical societies, termed Divisions, which are grouped together for certain administrative and scientific purposes into Branches. Once a year, or more often if a special necessity arises, representatives of each Division meet as a Representative Body, which has been described as the Doctors' Parliament. The central executive of the Association is an elected council, responsible for the general management of the Association, including publication of the *British Medical Journal*. The Council, in conjunction with the Representative Body, appoints a number of standing and special committees which report to it periodically. The officers of the Association include a President, a Chairman of the Representative Body, a Chairman of the Council, and a Treasurer.

The B.M.A. encourages the creation of autonomous bodies in the Dominions. In Australia there is the Federal Council of the B.M.A. (Australia), in South Africa the Federal Council of the Medical Association of South Africa (B.M.A.), and in the Irish Free State the Irish Free State Medical Union (I.M.A. and B.M.A.). The Canadian Medical Association is an independent body, but is affiliated to the B.M.A., and on several occasions the B.M.A. has held its annual meetings in Canada.

The Association is a member of the Association Professionnelle Internationale des Médecins. This body is an international association of national professional organisations. It acts as a central bureau of information and studies professional problems common to many national bodies, such as the relationship between the doctors and the State, and between the doctors and the large collective bodies concerned with public health.

The Work of the B.M.A.

The B.M.A. is often accused of interesting itself only in matters relating to the remuneration of doctors and of placing obstructions in the path of medical reform. This is certainly unfair. It has, as a professional body, concerned itself in securing adequate rates of pay and conditions of service for doctors, and during the pre-war National Health Insurance fight the machinery of collective bargaining was evolved and used with effect. Nor has the Association discarded this weapon. The Insurance Acts Committee of the Association negotiates direct with the central departments in these matters. It includes a preponderance of persons who represent the local medical and panel committees and need not be members of the B.M.A. In 1920 and 1924 the question of the remuneration of panel practitioners had to go to arbitration. In 1924 the B.M.A. again used the "strike threat," and 95 per cent of the panel doctors handed in conditional resignations. Since 1905 the Association has had a Central Emergency Fund to provide help for doctors who are suffering as a result of their support of the Association's policy. The Association also refuses to accept advertisements in the *British Medical Journal* for posts where the conditions are unsatisfactory and inserts "important notices" advising members to make inquiries if they are interested in appointments under certain local authorities. *The Lancet* and the *Medical Officer* collaborate to give effect to this policy. The B.M.A. fought for the right of doctors to army rank and military titles. It formed the Poor Law Medical Officers Association to secure the proper payment of medical men employed by the Guardians. Recently, in collaboration with the Society of Medical Officers of Health, it has endeavoured successfully to secure adequate salaries for Medical Officers of Health. Here the "black list" method of the *British Medical Journal*, in which the *Lancet* and the *Medical Officer* co-operate, has been largely successful. The B.M.A. has hardly concerned itself with the fees charged to private patients, although the Hon. Secretary of the local division may give information to a practitioner about the custom prevailing in the district. After the War the Representative Body passed a resolution to the effect that an increase of at least 50 per cent in the scale of fees was justified. All these measures have raised the status and remuneration of doctors in the country and have made the profession more attractive for men of the highest intellectual ability whose characters would make them pre-eminent in other professions.

While the B.M.A. is not the final authority over discipline, it has on occasion pressed policies on the G.M.C. For example, it was largely responsible for the "warning notice" against advertisement in 1902, and its tightening up in 1922. So powerful, too, is the B.M.A. that the candidates which it supports for the position of "direct representatives" on the G.M.C. are always elected. It has drawn up, also, through its Central Ethical Committee, which concerns itself with professional conduct, a series of pronouncements on medical etiquette which have been approved by the Representative Body. Thus it has formulated a set of rules for the guidance of the profession when it becomes necessary for one practitioner to call in another in consultation. It has severely condemned the practice of fee-splitting, generally known as dichotomy, as detrimental to the honour of the profession. The B.M.A. has always insisted on the preservation of absolute professional secrecy, and the Representative Body has expressed the opinion that the proper preservation of professional secrecy necessitates a measure of special consideration being recognised for medical witnesses in Courts of Law above and beyond what is accorded to the ordinary witness. Advertising in every form by practitioners is discouraged. The B.M.A. has also evolved certain methods of procedure which enable it to provide an experienced and impartial tribunal suitable for dealing with questions of professional conduct not sufficiently serious to bring them within the purview of the G.M.C., and to deal with disputes between members of the profession.

The criticism has been made of the B.M.A. that its interest in any field of medical policy is apt to develop after and not before public interest in the same subject. Doctors are extremely busy men who work long hours and need to do a great deal of reading if they are to keep themselves familiar with new treatment and new developments in diagnostic technique. It is not entirely reasonable to expect them to devote a great part of their time to the elaboration of proposals for new health services, particularly where, as often happens, these are to be supplied by public authorities rather than by general practitioners, and where, as is also usually the case, they bristle with administrative complexities. The danger that proposals may be put forward by others which, apart from any effect they may have upon medical income, appear to medical men unsound in principle, has indeed led the B.M.A., particularly in recent years, to take more and more initiative in formulating proposals. But neither the fact that the B.M.A. is the recognised protective association for medical men nor the fact that in the past it may have been backward in initiating plans of its own for the health services, and on occasion hostile to plans initiated by others, can justify underrating the value and importance of the views it expresses on these matters at the present day.

It is unnecessary here to describe in detail the work of the B.M.A. in promoting the health services, for this work is discussed in the relevant sections of the report. It should be mentioned, however, that the B.M.A. helped to secure such co-ordination of the medical services as exists under the Ministry of Health and the Department of Health for Scotland. It has played its part also in other administrative and legislative reforms such as the creation of the school medical service. It continues to advocate improvements in the health services, such as the extension of National Health Insurance to the dependants of insured persons. The Reports of its Committees on Nutrition (published 1933), Fractures (1935) and Physical Education (1936), have been invaluable contributions to the public and professional discussion of these subjects and have played a considerable part in shaping the government of the day's policy. Through the work of these and similar committees the Association helps to promote medical research, which it also assists by the award of prizes and scholarships. The work of general medical education and enlightenment is also helped forward by its publication, the *British Medical Journal.*

Other Professional Organisations

Other professional bodies include the Society of Medical Officers of Health, which had a membership in November 1936 of 1,850, drawn from doctors in local government or central government services or holding a Diploma in Sanitary Science, Public Health or State Medicine. It is organised in branches or groups distributed throughout the country. The informative monthly journal, *Public Health*, is published by it. It acts in close co-operation with the B.M.A. to secure adequate remuneration and good conditions of work for doctors in the service of local authorities. Its other activities include the study of questions connected with public health.

The Medical Women's Federation has a membership of 1,600. Its purpose is to promote the position of women in the profession and it collaborates closely with the B.M.A. The Medical Practitioners' Union, with a membership of about 5,000, aims at doing much the same work as the B.M.A. Unlike the B.M.A. it is affiliated to the Trades Union Congress. The Union has a number of committees studying problems connected with national health. Recently it published a memorandum on a National Maternity Service and gave evidence before the Committee on the Scottish Health Services.

MEDICAL TRAINING

History

The relationship between medical training and the medieval universities has already been mentioned, and also the failure of the eighteenth century universities to provide medical instruction. Instruction of students at hospitals began at the end of the seventeenth, and by the end of the following century the practice of "walking the hospitals" developed as an additional training to apprenticeship, and there grew up something like medical schools at four London hospitals. After the passing of the Apothecaries' Act in 1815 private medical schools developed. But these gave way to modern medical schools connected with large hospitals, which had already developed in Scotland. The first to be organised was that at University College Hospital, London, in 1827. From then onwards medical education steadily improved in England. The Medical Act of 1886 remedied a defect in the Act of 1858 by requiring that the qualifying examination for a licence must be in both surgery and medicine and thus consolidating the profession. The medical schools at Oxford and Cambridge revived and others developed.

Besides the medical corporations all the eighteen universities in the British Isles are licensing authorities and grant degrees in medicine, surgery, and sometimes midwifery.

The functions of licensing authorities are described in the preceding section. Connected with all the universities and some of the corporations are medical schools or departments, which students studying for a medical qualification must attend. But a student need not be studying for the qualification given by the university of which the medical school is a constituent part when he is a member of the school. Thus the 12 well-known London schools prepare students for the examinations of the English medical corporations, of London University and of other universities.

Length and Cost

A medical education lasts at least five years. It cannot be completed at the universities of Oxford, Birmingham, Bristol, Liverpool, and Wales, and at University College, Galway, in less than six; and at Cambridge, Leeds, London, Manchester and Sheffield in less than five and a half years. The recent discussion on the reform of medical education showed that there was a general feeling that five years was the minimum time in which professional training could be acquired, but also that it would be undesirable to lengthen the period. Nevertheless, one failure to pass the necessary examinations or to attend sufficient lectures, which may be due to bad luck or illness, may make the course at least six months or a year longer than the minimum. The *British Medical Journal* in its Annual Educational Number of September 4, 1937, stated that about £1,500 is required for the full training, of which about two-thirds to three-quarters is spent on maintenance. Obviously, at medical schools and universities where the standard of living is higher than this estimate would imply, very much more is often spent. On the other hand, there are numerous scholarships and money prizes at most schools and universities, and in Scotland the Carnegie Trust gives valuable help to poor Scottish medical students. There were 11,176 male and 1,747 female students of medicine, including dentistry, in Great Britain during the academic year 1935-36.

The amount of time and money occupied by medical training evidently exercises a decisive influence over the recruitment of the profession. It is to some extent possible, notably in Scotland, for the student with talent but no family financial support to qualify in medicine, but in the great majority of cases a family able and willing to put up a very considerable sum of money for maintenance and for the expenses of training is indispensable. In effect, therefore, there is a stiff entrance fee to the profession, which is chiefly recruited from those who can raise this entrance fee or a substantial part of it, while those with ability but no capital are frequently lost to medicine. A further point about medical training which must be recorded on broader grounds is the completeness with which it tends to cut the medical student off, during his most formative years, from experience of social and economic conditions outside a narrow groove. This segregation is responsible for some of the problems met with in many parts of the health services.

Existing Scheme of Medical Education

It has already been shown in the preceding section how the G.M.C. are responsible for the standard of medical education in Great Britain, and how the various licensing bodies yet maintain a certain autonomy. The whole question of medical education has been under discussion in this and other countries in the past two decades. Four very important reports have been issued in the last five years, the Final Report of the American Commission, the Report of the British Medical Association's Committee on Medical Education, a Bulletin on "Medical Education and the Reform of Medical Studies," issued under the auspices of the Health Organisation of the League of Nations, and the Report of the Conference of the representatives of the Universities of Oxford, Cambridge, and London, the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London. These discussions showed general agreement, and in May 1936, on the recommendation of its Curriculum Committee, the General Medical Council passed resolutions and recommendations which give effect to this agreement and come into force on January 1, 1938. Consequently the medical curriculum is in a transitional stage.

A student who has passed an approved examination in general education and the Pre-registration Examination in elementary chemistry and physics, or has been exempted from it, generally by taking the Higher School Certificate, can, if he has attained the age of 17, be registered by the G.M.C. Actually most students register only with a licensing body. These arrangements will be changed in 1938, when a student will not be allowed to register before he is 18, and the licensing bodies have been asked to encourage registration with the G.M.C. After 1938 anyone who remains at school, having taken the examination in general education, must take a pre-registration examination which shall include two subjects of general education if physics and chemistry have been studied, but this will not be required of students who have been to a university. Both the medical profession as represented by the B.M.A. and other bodies, and representatives of the teaching profession, have favoured an increase in the range of the general education of the medical student, but this discrimination between two classes of students has been regarded very unfavourably.

The first part of the medical course generally occupies about two years, which must be spent at a university or medical school recognised by a licensing body. In it the medical student acquires an advanced knowledge of physics and chemistry. At the same time he studies biology, for this is an essential groundwork of his other studies. In some schools he has already acquired a working knowledge of it, and some licensing bodies allow the examination in it to be taken directly after matriculation. A great deal of the student's time is devoted to anatomy, and he must dissect the whole body. In this way the student obtains a clear visual image of the human body in all its parts and of their inter-relationship. Closely linked to this study is that of physiology. Here again the student devotes a great deal of time to laboratory work. In all universities it is possible to take a B.A. or B.Sc. in these scientific subjects which exempt a person from that part of the professional examination and encourage a student to intensify his knowledge of these subjects. At the same time, the universities and other authorities have been criticised for their failure to stress the importance of biology in general education. At Oxford, Cambridge and at Trinity College, Dublin, and in the University of Wales a B.A. degree is necessary before a medical degree is granted. The resolutions of the G.M.C. which come into force in 1938 insist on the incorporation of, among other things, genetics, the elements of normal psychology and an introduction to pharmacology in the course. This change has been criticised as not going far enough. The British Medical Association Committee considered that dissection of the whole body was unnecessary for medical students, and that anatomy should be treated as a study of the living rather than of the dead body. Similarly, they thought that physiology should be taught not as a pure science, but as human physiology. It has also been said that the course is still too overloaded and does not afford the student an opportunity of thinking for himself.

The second half of the medical course is spread over three or more years. It consists of the advanced theoretical sciences and the clinical subjects. The latter, according to the regulations of the G.M.C., must be studied for three academic years in a hospital or dispensary recognised by a licensing body. The hospital is generally attached to a medical school or department. The advanced theoretical subjects include pharmacology, pathology, bacteriology and forensic and preventive medicine. They are correlated to the clinical work and the pathology includes laboratory and post-mortem work.

The object of clinical teaching is to instruct the student in the diagnosis, pathology, prognosis and treatment of disease. In medicine, lectures are devoted to this subject, and for at least six months the student must work as a clinical clerk. Part of this time may be spent in an out-patients' department, but at least three months must be spent on whole-time work in the hospital wards. The student in the wards has a number of patients under his care and sees them through all the stages of their illness under the guidance of the responsible physician. Clinical instruction in medicine also includes lecture demonstrations in the various diseases, applied anatomy, applied physiology and clinical pathology. Similarly in surgery the practical work of a surgical dresser lasts for at least six months and includes a practical training in surgical methods, including mechano-therapeutics, instruction in the administration of anæsthetics, a course in operative surgery and instruction in radiology. Instruction in obstetrics, infant hygiene and gynæcology is given on similar lines, but generally only for two terms. Subsequent to the periods of clinical clerkship and surgical dressership, attendance at a maternity hospital or similar institution, and work on in-patient and out-patient gynæcological practice for six months, is demanded of the student. Two months must be spent as a resident pupil in a maternity hospital or similar institution. The student must also attend at least twenty cases of labour, under adequate supervision. The importance of ante-natal work is stressed. Special regulations also govern clinical instruction in acute infectious diseases, tuberculosis, pædiatrics, dermatology, venereal diseases, ophthalmology and other subjects. The alteration in the curriculum due to the resolutions of the G.M.C. of May 1936 will bring the studies in the latter half of the medical course up to date, by adding to it instruction in psychology, mental disorder and mental deficiency, and by laying a greater stress on hygiene and public health.

Sometimes the Hospital Registrars do the clinical teaching. Generally it is done by the consultant surgeons and physicians on the honorary staff. But these are necessarily very busy men. They teach, attend their hospital patients, and have their private consultative work. At the same time they are expected to do literary and research work. Moreover, some of them are undoubtedly without the scientific outlook which is absolutely necessary for teachers. Therefore there have been suggestions for changing the system. The problem has been particularly acute in London and, partly as a result of the Royal Commission of 1913 on London University, experiments were carried out at first by the Board of Education and after 1919 by the University Grants Committee and the Medical Research Council on the creation of clinical units. The Nuffield Bequest has enabled similar units to be set up in Oxford. Their creation entails the appointment of a professor who can devote the greater part of his time to teaching treatment and research in medicine, surgery, obstetrics, gynæcology and pathology. He must have an adequate whole or part time staff, the control of 50-100 beds, an out-patient department and ample laboratory accommodation and scientific equipment. These units provide an admirable team of scientific workers in the medical schools while they do not interfere with the valuable practical ward teaching of the other members of the hospital staff.

Another criticism directed against the present system of medical education is that the student only sees in the hospitals the bad cases with well developed symptoms. This is often true, even in the out-patients' departments. Moreover, he has nurses, instruments and apparatus available which, even under the most favourable conditions, would be lacking in private practice. He gains, too, no experience of work in the patients' homes. In Scotland, however, the dispensary system exists and there medical students are sent from them into the patients' homes. Thus they see unselected cases handled both by experienced physicians and by specialists. The Report of the Committee of the British Medical Association on medical education suggested that after passing the Final Examination a student should take up a resident appointment in a teaching or other approved hospital; an appointment as a clinical assistant at an approved hospital or clinic; an appointment as a pupil assistant to a general practitioner; an appointment as a pupil to a medical officer of health; or remain in regular attendance at hospital practice in a medical school.

Post-Graduate Education

Post-graduate work is either the preparation for higher degrees in specialised subjects, the continued study of such specialised subjects, or refresher courses for general practitioners. Higher degrees are a recommendation in applying for some posts. In the case of a medical officer of health, a degree or diploma in Public Health, Sanitary Science or State Medicine, recognised by the G.M.C. is often required.* Nor, according to the regulations of the General Medical Council, can this be obtained until after two years from qualification and a year must be devoted to studying for it.

Refresher courses of lectures are arranged at Manchester, Bristol, Newcastle, Cardiff, Edinburgh, Glasgow, and Trinity College, Dublin. Some of the divisions of the British Medical Association organise post-graduate courses. In London courses can be obtained at the British Post-Graduate Medical School at Hammersmith, at the West London Post-Graduate College, and at the North-East London Post-Graduate College. The latter is associated with the Fellowship of Medicine and Post-Graduate Medical Association, which arranges general courses, and courses in specialised subjects for general practitioners.

This work of providing refresher courses is obviously most important and opportunities for more medical men to take advantage of it should be made. A valuable contribution to these opportunities was foreshadowed when in August 1937 the Minister of Health made an important announcement concerning post-graduate courses for insurance practitioners. Until recently grants were only available to enable panel practitioners in rural areas to attend short courses. In future, however, grants are to be made available for all insurance practitioners provided five years have elapsed since they have been registered as medical practitioners, and that they have not less than 300 (150 in a rural area) insured patients on their list. No grant will be payable to the same practitioner more than once in five years. The grant is to be on a generous scale and includes the payment of a fee for the course, travelling and subsistence expenses and the payment of a whole-time locum tenens where this is necessary. Naturally, a great deal of the work is to be done in connection with the British Post-Graduate Medical School at Hammersmith, which provides some of the best facilities in England for this kind of work.

---

* See page 156

The other important post-graduate work is advanced study and research. The opening of the British Post-Graduate School at Hammersmith in connection with the L.C.C. Hospital there, and Lord Nuffield's munificent gift to Oxford in October 1936 for the creation of a post-graduate school, mark a revolution in the history of British post-graduate work. At Hammersmith the school is organised in clinical units and the Oxford post-graduate school will follow the same pattern. At the London School of Hygiene and Tropical Medicine, post-graduate study in public health, epidemiology, medical protozoology, medical entomology and medical industrial psychology are carried on intensively. At Edinburgh valuable post-graduate work is done which attracts graduates from England and the Dominions. In London post-graduate work is done at many of the medical schools and at the West London Post-Graduate College, at the North-East London Post-Graduate College, at the Post-Graduate School of Radiotherapy, and at the West End Hospital for Nervous Diseases. Cambridge, Birmingham, Bristol, Liverpool, Manchester, Sheffield, Durham, Glasgow, Aberdeen and St. Andrews have post-graduate courses. The Joint Tuberculosis Council also provides nomadic courses in its special subjects.

ANALYSIS OF THE WORK AND STATUS OF THE MEDICAL PRACTITIONER

Introduction

This section describes the work and position of the general practitioner, showing his relationship to the public and the manner in which his services are remunerated. An account is given of the work of doctors in the local government service and reference is made to the central government services and to the employment of doctors in the Forces.

Numbers of Registered Medical Practitioners

It is difficult to estimate the number of registered medical practitioners working in Great Britain. The official Medical Register contains the names and addresses of all persons accepted by the General Medical Council as "registered medical practitioners," and the record is accepted as evidence in the Courts of Law; such persons are entitled to practise their profession in the British Isles and wherever medical practitioners on the British Register have been granted the right to practice. The total in 1937 was 59,010, but this includes doctors in the fighting and colonial Services and also doctors who have retired from practice. The Medical Directory, a private and non-official publication, groups practitioners according to their geographical distribution and records their several professional appointments. The numbers in its 1937 edition are set out below:

London (Postal District)	9,097
Provinces . . .	25,014
Wales	1,860
Scotland . . .	5,758
Ireland . . .	3,584
Abroad . . .	10,336
Services . . .	3,102
	58,751

The 1931 census returned as "physicians, surgeons and registered medical practitioners":

	England and Wales	Scotland	Great Britain
Practising—			
Males	26,490	3,567	30,057
Females	2,810	521	3,331
Total . .	29,300	4,088	33,388
Retired and out of work . .	3,855	391	4,246

The figures given in the Medical Directory for the same period were 32,626 for England and Wales and 5,854 for Scotland. This gives some indication of the proportion of doctors in the Directory who were actually practising, although even the census figures probably contain a small proportion of persons who returned themselves as occupied but were, for practical purposes, retired. It will be observed that there is approximately one woman practising medicine to every ten men. Although there are certain obvious differences in the spheres of the two sexes, the general conditions of practice are identical and we have not thought it necessary to discuss women practitioners' problems separately.

Powers and Duties of Registered Medical Practitioners

Over the last eighty years the State has vastly increased the official powers and duties of the medical practitioner, who has become, in some senses, a public servant. For instance, only a registered medical practitioner may sign medical certificates required by law, including certificates in connection with death, mental deficiency, lunacy, pensions and workmen's compensation. Similarly, practitioners have responsibility in connection with the notification of births and still-births at which they have been in attendance, and they must inform the appropriate authority of the existence of infectious diseases and of certain occupational diseases among their patients. At the same time, as we have already shown, registered medical practitioners have been given an increasing number of privileges, such as the sole right to sue for professional fees in a court of law, and the monopoly of service in various public offices and as panel practitioners under the National Health Insurance system.

THE GENERAL PRACTITIONER

The great majority of medical students who qualify go into private general practice. As general practitioners they are to be found in every town and large village up and down the country. They may work in a crowded slum area, or they may have to visit patients over a radius of ten or more miles. They are expected to deal with anything from common childish ailments to such emergency cases as a fractured skull or other results of serious road accidents. In the last decades of the nineteenth century many doctors became the employees, on a capitation basis, of medical aid societies and later of the clubs or friendly societies. Others had "clubs" of their own, but until the National Health Insurance Act 1911, many of them were primarily concerned only with their private practices. With nineteen million workers entitled to medical benefit under the National Health Insurance Acts, the majority of general practitioners have accepted service under the Acts, receiving payment for their services on a capitation basis. Some are still engaged in various forms of contract practice in connection with friendly societies and public medical services. Many do part-time work as district medical officers for the public assistance committees, or as certifying factory surgeons for the Home Office, or as part-time doctors for industrial firms or for private schools. Others, again, are recognised as experts in a particular branch of medical practice by the members of the profession in their area, and may hold honorary appointments at the local hospital.

In 1936 the numbers of panel practitioners were:

England . . .	16,000
Wales	969
Scotland . . .	2,040
	19,009

This gives some idea of the number of general practitioners in Great Britain since, with a few exceptions, all panel practitioners are general practitioners. There are some general practitioners who are not panel practitioners, but there is no means of ascertaining the numbers in this class.

Types of General Practitioner

General practitioners might be divided into three groups. There is the "Mayfair" practitioner, who is to be found in the West End of London and in the smart districts of a few industrial towns where the richest people tend to live. His is a lucrative profession. But there are few men who combine the luck, the ability and the financial and social qualifications to obtain this kind of practice. There is the practitioner serving middle-class areas, mostly in the suburbs of large towns. This kind of practice is not so profitable as that of the "Mayfair" practitioner, but nevertheless it may be quite remunerative. In the country a practice of this kind is generally combined with a working-class practice. But sometimes middle-class patients go to the doctor's front door and working-class patients to the surgery door. One class of patient comes by appointment, the other is expected to take his turn and may have a considerable time to wait in what is sometimes an uncomfortable waiting-room. Finally, there is the working-class practice which is almost entirely confined to the working classes and lower middle classes, and always combined with panel practice. Usually the general practitioner becomes panel doctor to the insured breadwinner of the family and looks after the other members of the family in his capacity as a private practitioner.

A qualified doctor may begin practice either by putting up a plate and waiting for a clientele of patients, or he may buy the goodwill of a practice or a partnership share in a practice. "The purchase price is usually based upon the gross average of the preceding three years. . . . An average price to pay is one and a half year's income."* Practices and partnerships for sale are advertised by transfer agents in medical journals. It is sometimes possible for a young man entering on such an enterprise to obtain advice and even financial assistance through the British Medical Association's approved insurance scheme. But by whatever means he raises money, the arrangements will probably lay a heavy and worrying financial burden on him, since they may entail the repayment of as much as £2,000 or £3,000.

Medical Partnerships and Assistantships

A medical partnership has certain advantages to the doctors concerned. It affords opportunities for mutual consultation and for the arrangement of holidays, and one or more of the partners may make time and opportunity to cultivate skill in some selected branch of practice. On the other hand, there are possible stresses and some risk of friction. The partnership pattern is increasingly used, and it may include not merely two, but several members. Another relation is that of assistant to a medical practitioner. The assistant must himself be qualified, and he is usually a beginner who is anxious to gain practical experience; sometimes such a position leads to a partnership. Both in partnerships and in assistantship definite deeds of agreement are highly desirable or even essential. There are also ethical rules, defined by the British Medical Association, governing the relations of partners and of principal and assistant. Doctors, moreover, often become members of one or other of the medical defence associations. These advise and help in difficult situations, and in intra-professional disputes may settle controversies by arbitration.

It is impossible to estimate the number of partnerships in Great Britain, but some indication of their relative importance in the organisation of the medical profession can be gained from the following figures. In the County of London on December 31, 1936, there were 2,162 doctors on the medical list of the London Insurance Committee (101 were in institutions, 2,061 in general practice); 415 of these were working in partnership and 151 employed one assistant with the consent of the Insurance Committee. (An insurance practitioner is not allowed to employ more than one assistant in his insurance work without the consent of the Minister of Health.)

*Handbook for Recently Qualified Medical Practitioners, published by the B.M.A.

Remuneration

In private or panel practice a doctor must provide his own equipment, house and surgery. He generally needs a car, and sometimes, perhaps, a secretary. If he does his own dispensing he may need a trained dispenser. Thus a doctor's overhead charges are high and capital must be possessed or borrowed not only to buy a practice, but to provide the equipment for it.

A doctor's remuneration from panel practice is limited by orders issued by the Minister of Health under the National Health Insurance Acts. It consists now of a capitation fee of 9s. per patient per annum. The individual panel practitioner, however, may not receive exactly this amount, for it is estimated on a national basis. The Central Practitioners' Fund is set up at the beginning of each year and calculated on the basis of an estimate made by the Government Actuary of the number of insured persons which is checked by a representative of the Insurance Acts Committee. This is distributed to the insurance committees who distribute it to the panel doctors on the basis of a local Distribution Scheme drawn up by the insurance committee and the panel committee jointly and approved by the "Minister." Generally an amount to cover charges for administering anæsthetic and to cover the administrative expenses of the panel committee is first deducted. The remainder is then distributed quarterly to panel practitioners in proportion to the number of patients on their "lists" with additions or reductions according to whether any emergency treatment has been given by an individual panel doctor to another panel doctor's patients or whether his patients have received such treatment. There are specific allowances available for a panel doctor who has given anæsthetics for another panel doctor. In England and Wales the country doctor is required to supply drugs and appliances himself. He gets a capitation allowance of 2s. 3d., with special payment for the supply of some appliances and expensive drugs such as vaccines and insulin. In Scotland doctors who dispense drugs are paid by a capitation fee which is based each year on the average amount per insured person paid to chemists in the area during the preceding year, certain expensive preparations, e.g. liver extract and insulin, being paid for specially. In rural areas there is a mileage allowance if a patient lives more than two miles from a doctor. Remuneration from panel practice is further limited by the fact that a doctor may not have, except in very special circumstances, more than 2,500 insured persons on his list. Partners may have an average of 2,500, although one partner may have up to 3,000. For each assistant a doctor employs he may add another 1,500 to his list. Thus a doctor working alone could earn a gross income of about £1,125 from panel practice through his capitation fee of 9s. per patient. However, in 1935 there were 15,299,000 insured persons on lists of insurance practitioners in England and Wales, and 16,600 insurance practitioners. Thus the average number of insured persons per panel doctor was only 922. Consequently, the average gross income from panel practice is only £415. However, it is probable that the dependants of insured persons, who are estimated to average a little under one per insured person, also make use of the services of the panel practitioner.

When two or more doctors unite to form a "firm," overhead charges on accommodation and equipment may be reduced and thus the net income for each member of the "firm" may be increased. Assistants are allowed in insurance practice, and there have been complaints that in a few cases some of these do the main part of the work for inadequate remuneration.

It is, of course, very difficult to estimate the income to be derived from general practice. The Insurance Acts Committee have attempted to arrive at figures for various types of general practitioners carrying out insurance work.* They examined the accounts of "a number of widely-distributed practices" for the years 1929-31. The incomes and expenses per practitioner for 1931 may be summarised as follows:

Type of practice	Number of Practitioners	Average Gross Income	Average Practice Expenses	Average Net Income
Dispensing for—		£	£	£
All patients . . .	35	1,456	530	926
Private patients only . .	108	1,629	540	1,089
Some insured and all private patients	46	1,994	752	1,242
No dispensing . . .	6	1,736	487	1,249

The item "practice expenses" does not, of course, cover the whole of a doctor's necessary professional expenditure. He is virtually obliged to support a comparatively high standard of life, and while he enjoys the advantages of this standard he may be compelled, in order to make ends meet, to deny himself amenities which a much poorer man would take for granted.

Moreover, doctors who have had to borrow to buy a practice have yet a further charge on their income. Nevertheless, there is no great demand for posts in the public services where the minimum salary for all but probationers is £600 a year, with the attraction of fixed hours, holidays and superannuation schemes.

The General Practitioner's Relation to National Health Insurance

Any qualified medical practitioner may have his name entered on the Medical List by notifying his wish to the clerk to the local insurance committee, who registers his name on the list of panel practitioners kept at every Post Office. Thus it is publicly announced that the particular doctor is ready to receive panel patients. The "insured person," who is supplied with a medical card by the local insurance committee, presents it to the doctor of his choice. If the doctor is willing to accept him as a patient the doctor sends the medical card to the insurance committee. The committee then supply the practitioner with a record card and return the medical card to the insured person. In fact, "insured persons" are generally placed on the list of the panel doctor nearest to their home, and if they wish to change they may do so. In this way panel practice is opened to all qualified doctors; free choice of doctor is reserved to the patient, and the doctor is given the power to refuse a patient. Since, however, the insurance practitioners of an area accept collective responsibility for all insured persons within that area, there are some restrictions on the exercise of this latter right. Moreover, a panel doctor must accept as a temporary patient an insured person who is away from home for less than three months.

*Published in Supplement to the British Medical Journal, May 29, 1937.

The National Health Insurance Act lays down that provision shall be made for medical treatment and attendance. The terms of service of a panel doctor specifically state that "all proper and necessary medical services other than those involving the application of special skill and experience of a degree or kind which general practitioners as a class cannot reasonably be expected to possess" shall be provided. If, however, a doctor wishes to show that some treatment he has carried out is not within his terms of service, and therefore that he may charge for it, the burden of proof lies on him. A panel doctor must visit his panel patients if their condition requires it. Otherwise they must come for treatment to his surgery. A panel doctor must possess a proper and sufficient surgery and waiting-room accommodation. Over these conditions the insurance committees exercise a general supervision. A doctor is required to provide the services of another doctor, for the administration of an anæsthetic, when necessary, in connection with any operation (other than an operation in respect of a confinement) which the doctor undertakes, irrespective of whether the operation falls within the doctor's terms of service under the Act. A fee for the services of the second doctor may be claimed from the local Practitioners' Fund.

The Chief Medical Officer of the Ministry of Health in his Annual Report for 1935 states that: "The smoothness of working of this vast scheme may be regarded as generally recognised. On a conservative estimate, in each year 8,000,000 insured persons seek medical advice and over 50,000,000 attendances are given by the doctors. In these circumstances it is remarkable that during 1935 in only 157 cases was it necessary to investigate a complaint regarding the adequacy of the service, and in only 48 of these were the facts held to justify the imposition of a penalty. In addition to this negative evidence from the paucity of the number of complaints, there is also ample positive testimony from competent observers to the success of the Insurance Medical Service. The vast majority of insurance practitioners interpret the terms of their contract in no niggardly spirit, and undoubtedly the standard of the service they give is not only high, but is yearly rising as fresh advances of medical science add to the general practitioners' armamentarium in diagnosis and treatment."

Certificates

The panel practitioner has a statutory duty to issue certificates, of which there are three types in normal use, to insured persons. They are the first certificate, the intermediate certificate, and the final certificate. These certificates, except the final certificate, must be issued to an insured person if he asks for them and circumstances warrant their issue. They set out that the patient is unfit for work. They also set out the cause of the incapacity for work. The final certificate must be issued directly the doctor is of the opinion that the insured person is fit for work. There is also the intermediate convalescent certificate which may be issued if the patient has been certified incapable of work by the doctor for twenty-eight days. There are other certificates to be used on special occasions. On these certificates rests the whole National Health Insurance system, the sickness and disablement benefits of which in 1936 totalled £17,235,000 in Great Britain. If the patient's approved society has informed the doctor that it is providing a particular form of special medical or other treatment as an 'additional benefit,' and the doctor considers the patient would benefit by such treatment he must, if requested by the patient, state in his next certificate that such treatment is recommended.

Drugs

"Proper and sufficient medicines" must be supplied to insured persons as part of medical benefit. As a general principle it is held that the doctor prescribes and the chemist dispenses. But in areas where a chemist is not available an insurance committee may require the panel doctor to supply drugs and appliances. Again, a wide definition has had to be clarified. Medical appliances which may be supplied or prescribed for as part of medical benefit have been set out in regulations. No definition of the requisite "drugs" has been considered admissible. But a National Formulary for England and Wales has been issued by the Insurance Acts Committee of the British Medical Association, with the co-operation of the National Pharmaceutical Union (formerly the Retail Pharmacists' Union), and sometimes there are local formularies issued by the panel committees.

Insurance committees are empowered to question whether a particular preparation prescribed by a doctor is a drug forming part of medical benefit, and there is machinery in which the doctor concerned and his panel committee are represented for settling each case. The insurance committees are grouped in England and Wales into 15 different areas in which there are central pricing bureaux for dealing with chemists' accounts. The purpose of these bureaux is to price the prescriptions dispensed by pharmacists and to complete returns and summaries of those prescriptions. These returns and summaries are sent at intervals to the central departments, where they are scrutinised for any abnormalities such as outstanding high average cost or frequency per insured person when compared with the average cost and frequency for the area as a whole. Explanations from the doctor and a report from the regional medical officer may be called for in such cases. The practitioner concerned may then be warned and further action postponed, or the case may be referred to the panel committee. The determination of whether there has been excessive prescribing rests with the panel committee, and when the practitioner's right of appeal to the Minister has been exhausted the insurance committee is empowered to recommend a monetary penalty to be imposed upon the practitioner if excessive prescribing has been established.

In Scotland National Health Insurance prescriptions are priced in one central bureau. Summaries and statistics regarding the prescribing of individual doctors are furnished to the Department of Health, to insurance committees, and to panel committees. The panel committee for each area are primarily responsible for the control of prescribing costs, and may, after investigation, recommend a surcharge where they are of opinion that prescribing costs are excessive. If the panel committee fail to carry out their obligations, the insurance committee have a duty to carry out an investigation, and if they fail to do so, the central department may appoint someone to investigate and report, and may impose a surcharge. A doctor has a right of appeal except where the surcharge is imposed by the department.

Suggestions that excessive prescribing is widespread are constantly being made. These suggestions are partly due to the rising cost of drugs and appliances supplied by chemists to insured persons. In the Annual Report of the Chief Medical Officer of the Ministry of Health for 1935 the annual expenditure per insured person in England and Wales was given as 3s. 1d. and the total sum was £2,237,400. Examples of criticisms are contained in the Report of the Chief Medical Officer who said: "One is driven to assume that in some areas insured persons have acquired a habit of medicine drinking which the practitioners in those areas are reluctant to control." Later he remarks: "If it could reasonably be contended that the expenditure of such a sum on the provision of medicines is necessary or desirable in the best interests of the health of the people there would, of course, be nothing for adverse criticism. It is believed, however, that no body of well informed medical opinion would attempt to advance such a contention," and he went on to say that it is generally held that if doctors exercised "their unfettered professional judgment," the total cost of prescribing would fall spectacularly. The doctors through their central organisation are, in fact, co-operating with the Ministry in an endeavour to discover the factors which influence abnormal prescribing in certain areas.

Regional Medical Officers

A system was created in 1920 whereby doubtful cases of incapacity for work of insured persons would be referred by the panel doctors, approved societies or the local insurance committee to regional medical officers. In England and Wales in 1936 there were 34 regional medical officers, 37 deputy regional medical officers, and five divisional officers who supervise the five divisions into which England and Wales is divided for purposes of administration. In 1936 the regional medical officers had 496,073 doubtful cases referred to them. The numbers actually examined were 252,005, of whom 68,589 were held to be fit. Of those not examined 134,364 received final certificates before the date fixed for examination, and 109,704 did not attend for other reasons. Regional medical officers also assist panel doctors with second opinions. They usually become personally acquainted with all the panel doctors in their area in the course of official investigations, their customary annual visit, and their supervision of the medical records. There are also regional medical officers for Scotland.

Protection of the Rights of Panel Doctors

The panel practitioner is represented on the local insurance committee, the body which regulates relations between the profession and the insurance system and allocates capitation fees to the panel doctor on the basis of the number of patients on his list. On this committee is one doctor appointed by the Minister (unless it has less than 30 members), one appointed by the county council or the county borough council, or the corresponding authority in Scotland, and two appointed by the local medical committee, or in Scotland by the medical practitioners resident in the area. The insurance committee, further, has a medical services sub-committee which consists of an equal number of representatives of the general public and the profession. This committee investigates all complaints against panel doctors which come before the insurance committee. There are also two professional committees set up under the Acts. There is the local medical committee, which represents all doctors within the area of the insurance committee, whether they are on the panel or not. To it the insurance committee must refer all matters on which the committee desires a professional opinion, such as what is, or what is not, within the scope of medical benefit. It is represented on the medical services sub-committee. The panel committee represents all panel doctors in the area and must, under the Acts and Regulations, be consulted about specific points. It has the power of adjudicating on the actions of panel doctors. It is also represented on the medical services sub-committee and it may ask that committee to undertake investigations into any matter relating to the administration of medical benefit. If a medical committee is not set up, the panel committee may be recognised as one. The Insurance Acts Committee of the British Medical Association, already referred to, guards the interests of the profession in respect of the remuneration and terms of service of panel doctors.

The panel doctor has the right of appeal to the Minister of Health or to the Department of Health for Scotland from the decisions of the insurance committee or the panel committee concerning deductions from his remuneration and the conduct of his panel practice. The appeal may or may not be heard orally. If the previous findings have shown the doctor to be guilty of "negligence," a registered practitioner must be one of those hearing the appeal.

The Minister has the right to impose penalties on those panel doctors who are held by one of the committees not to be performing their duties adequately, or who are not observing their terms of service. To assist the Minister in dealing with cases of this kind there is an advisory committee, including panel practitioners, connected with the central departments. The penalties which may be imposed include the withholding of sums normally payable to the doctor, or his removal from the panel.

The latter penalty is imposed only on very rare occasions, and no doctor may be removed from the panel without a statutory inquiry. In England and Wales the committee of inquiry consists of a barrister and a solicitor and two medical practitioners. The procedure is judicial. The findings of this committee are then referred to the advisory committee before the Minister takes final action. Similar provisions for inquiry exist in Scotland. It has to be shown before the committee of inquiry that there has been a grave or persistent failure to provide proper treatment, personal misconduct of such a character as to bring the service into disrepute, or repeated breaches of the "terms of service." The Minister may act, in cases of criminal conviction, on his own initiative in setting up a committee of inquiry or if an insurance committee, a panel committee, or a local medical committee makes representations that the continuance of a practitioner on the panel would prejudice the efficiency of the medical service of the insured, he must set up a committee of inquiry. There is no appeal from the Minister to the courts.

Contract Practice

Apart from the vast National Health Insurance scheme there are other insurance schemes with which doctors are linked. Owing to lack of statistical material and other information about them, a defect which is partly due to the informality of the arrangements involved, they are difficult to analyse. Some of these schemes were in existence before 1911, and with some of the organisations concerned the medical practitioners and the British Medical Association have had varied and sometimes bitter relations.

Friendly Societies

Many branches of the friendly societies, which are often approved societies for purposes of National Health Insurance, and which before 1911 had extensive arrangements whereby their members could get free medical services in return for weekly payments, still provide such services for their uninsured members and for the dependants of insured persons. These arrangements are generally made by the local lodge or branch, which negotiates with the local general practitioners. Bargaining with individual general practitioners has always met with strong opposition from the British Medical Association, since the B.M.A. consider that arrangements of this kind should be open to all the practitioners in the area, and that private arrangements between a society and an individual doctor should not be entered into apart from the general arrangements. The British Medical Association also disapprove of the control of medical arrangements by laymen. However, relations between the British Medical Association and the friendly societies have improved, and in a few areas they have co-operated to create "public medical services." It is impossible to discover how many persons can obtain medical services as a result of their subscriptions to Friendly Societies. Some of the schemes are only concerned with juveniles. In Leeds, for instance, the Independent Order of Oddfellows Kingston Unity Friendly Society has organised a scheme covering only juveniles. Particulars are set out below:

Membership subscription for juveniles . .	2d. per week
Number of members	14,000
Capitation fee	6s. 6d. per annum
Number of doctors and assistants in the scheme	150

Free choice of doctor is, as far as possible, secured.

The Independent Order of Rechabites has approximately 17,000 juvenile and adult members of its medical schemes organised in about 100 different towns. Some 350 doctors co-operate with the society.

Works Contract Arrangements

In Scotland, in north-east England and in the Midlands there are many colliery and works "contract" arrangements. A weekly sum is deducted from the wages of the employee and paid to the local doctors, who then provide medical treatment to the dependants of the workers. These arrangements are generally managed by the employer. Owing to the long unemployment due to the depression in Scotland, many of these arrangements have broken down, and unemployment clubs, with varying rates of contribution, have been created so as to secure to the dependants of workers a continuance of medical treatment from their own doctor. In Wales, where schemes of this kind are also common, a poundage deduction from wages is generally made. Again, owing to the individual and unorganised nature of these insurances, it is impossible to ascertain the extent of the provision.

Medical Aid Societies

Medical aid societies were also a product of the late nineteenth century, and the British Medical Association engaged in a bitter struggle with them comparable to its struggle with the friendly societies. As a result of this struggle better conditions for doctors employed were obtained, and sometimes some medical control over the service was conceded. But generally there is no free choice of doctor. The British Medical Association consider the whole-time employment of doctors on a salaried basis undesirable, and condemn the tendency of societies to advertise and the infringement of professional secrecy involved in lay control of the records of patients. When National Health Insurance was introduced, insured persons were allowed to put themselves on the lists of existing approved institutions of this kind instead of on the lists of a panel doctor. However, new institutions of this kind cannot now be created. Such institutions make arrangements for the medical care of dependants, and often give other benefits, such as the provision of dental or ophthalmic services to insured persons. Persons on their lists pay additional subscriptions to secure these benefits. In 1936 there were 118,902 persons in England and 33,704 in Wales receiving National Health Insurance medical benefit through these or similar institutions. Again, it is impossible to determine the number of other persons outside the National Health Insurance provided with medical services in this way.

The G.W.R. Medical Fund Society and the Llanelly and District Medical Service

A very good service on these lines is provided by the Great Western Railway Medical Fund Society in Swindon. In 1936 about 42,600 persons, including insured persons, were covered for general practitioner, ophthalmic, dental and specialist treatment. An accident and general purposes hospital is run by the society. The expenses of members sent to other hospitals and sanatoria are also largely defrayed by the society. Members have the right to select their own doctor among those employed by the society. A modification in the present arrangements is likely to take place in the near future, since proposals have been formulated to combine the society's hospital with the Swindon and North Wilts Victoria Hospital and to give the society representation on the board of the new hospital (17 out of 42 places). The new hospital is also to carry out the X-ray, ray-therapy, ear, nose and throat work of the society.

An interesting service has arisen out of a dispute between the British Medical Association and the original Medical Aid Society at Llanelly. This is the Llanelly and District Medical Service. It provides a general practitioner service, ophthalmic, ear, nose, throat and general surgery services and it defrays the cost to its members of special drugs. The rates of subscription and income limits are:

National Health Insured Person, Additional Contributions

Married . . .	2s. 2d. per 4 weeks
Single . . .	1s. 2d. per 4 weeks

Non-insured Persons, Total Contributions to Cover all Services

Single . . .	2s. 2d. per 4 weeks	income up to £208 p.a.
Married . . .	4s. 0d. per 4 weeks	,, ,, £260 p.a.
Married . . .	5s. 0d. per 4 weeks	,, ,, £312 p.a.

The total number of subscribers is 18,100 (August 1937), and this, the secretary states, on the basis of the recognised local family ratio of dependants to subscribers, means that about 54,000 persons are covered for medical services. Twenty general practitioners co-operate with the service. Neither the general practitioners nor the consultants are debarred from doing work apart from their work for the service. The joint committee of the British Medical Association and the Trades Union Congress was partly the outcome of the Llanelly dispute. If the Board of Management of the Llanelly service is unable to reach an agreement about rates of contributions and salaries, the matter must be referred to arbitration by a committee of four, nominated jointly by the British Medical Association and the Trades Union Congress.

Both the Great Western Railway Medical Fund Society and the Llanelly and District

Medical Service provide a comprehensive medical service which should be the model of any national system of medical services. The latter also affords a model for solving some of the administrative difficulties of arranging for an extensive service.

Dispensaries (Free and Provident)

In a number of large towns in different parts of the country there are dispensaries which provide medical services for those who cannot get them in other ways. Most of these dispensaries are financed partly by voluntary subscriptions, donations and legacies. Some of them are run practically entirely on these resources, others have a regular income from contributors. It is impossible without organising a detailed survey of the whole country, to say how many there are in Great Britain and to how many persons they provide medical services. There are 40 of them in or near London, rather less than half being run on provident or part-paying principles.* They include, besides dispensaries proper, the London Medical Mission and the Medical Aid Society for Necessitous Women. One of the largest, the Battersea Provident Dispensary, had over 6,000 members in 1936. The entrance fee to it is one shilling and the scale of subscription is set out below:

One member of a family	3d.	per week
Two members ,, ,,	5d.	,,
Three ,, ,, ,,	7d.	,,
Four ,, ,, ,,	8d.	,,
Five or more members	9d.	,,
Widows with children shall not be required to pay more than	6d.	,,

Members either attend at the dispensary or at the surgery of the doctors at stated hours, unless that is impossible, when the doctors visit them. There is free choice of doctor among the doctors serving the dispensary. The doctors receive a capitation fee of about 6s. At some of the dispensaries the capitation fees are higher, while at some of the free dispensaries the doctors serve in an honorary capacity. Sometimes, as at the Aberdeen Dispensary, there is a specialist staff including a gynæcologist and a dentist and an anæsthetist. This dispensary and some others in Scotland are utilised by the medical schools for the instruction of students. The dispensaries, like most of the other provident medical schemes, have declined in importance since the introduction of National Health Insurance, the establishment of public clinics, and the growth of hospital contributory schemes.

Doctors' Clubs

The most informal type of insurance of this kind is provided by the "doctors' clubs." A doctor or several doctors organise in any given area a "club," members of which receive their services in return for weekly payments. Sometimes paid collectors are employed. The number of persons who pay into these clubs and their extent is quite unknown. It is difficult to say at what rate subscriptions are levied, but it is probable that they amount to at least 2d. per week per head.

---

*The Annual Charities Register and Digest, published by Longmans for the Charity Organisation Society, London.

Public Medical Services

"Public medical services" have been created by doctors to meet the need for an extension of regular medical service to the uninsured population who cannot afford doctors' fees, or who insure against them. A further object is the desire to avoid lay control, which the medical profession has always regarded as the objectionable side of "contract" practice. The British Medical Association for the last few years have been actively promoting the extension of these services and have set up a Public Medical Service Sub-Committee to supervise them. They have also drawn up model rules and taken special care to control the formation of any service and to arrange for the inclusion of friendly societies and doctors' clubs in it. They also convene an annual conference of representatives of the services.

A public medical service is a society of doctors who agree to render general practitioner services to weekly subscribers to a central fund. The British Medical Association model rules lay down that membership shall be open to all registered medical practitioners practising within the area. There is, of course, a general meeting of members. But the government of the service is, in accordance with the model rules, in the hands of a committee. In London the constitution is more elaborate as the service spreads over the county and neighbouring areas, and has a much larger membership than in other places. The committee make arrangements for the collection of subscriptions. They enter into agreements with chemists if medicines are provided in the service. They also allot to members their portion of the central fund on a capitation basis, according to the number of subscribers who register with them, after the expenses of the administration of the service have been deducted. Further, the committee arrange for the allocation of funds on a fixed scale of charges to non-co-operating practitioners when subscribers elect to chose them as their medical attendants. The model rules provide that members of a service shall not undertake any other kind of contract work.

Two things stand out clearly from this brief account of the government of public medical services. The principle of medical control and management is preserved intact and the principle of the free choice of doctor is extended, even including doctors who are not collaborating in the service.

Financially the service is, of course, dependent on the subscribers. But some services also levy an entrance fee of £5 on members, which is repayable at death or withdrawal from the service. Capitation fees are sometimes as high as 15s. per annum, although generally they average about 11s. 3d. The British Medical Association emphasise particularly strongly that capitation fees should not be less than the remuneration for similar work paid under the National Health Insurance Acts.

The subscription rates for two services are set out below:

Family of	London Public Medical Service per week	East Worcestershire Public Medical Service per week
1 subscriber . .	6d. or 4d.	4d.
2 subscribers . .	8d.	7d.
3 ,, . .	11d.	10d.
4 or more subscribers	1s. 1d.	1s.

Subscribers must be dependants of insured persons, persons earning £250 per annum or less, or of "like economic status." They are entitled to "medical and surgical treatment which general practitioners as a class may be reasonably expected to provide in the area covered." This is to be given at the doctor's surgery or, if the circumstances require, in the patient's home. A number of liabilities, such as medical services at confinements, vaccinations and administration of a general anæsthetic, are specifically excluded. Each subscriber is provided with a card similar to that used for National Health Insurance purposes. Collectors are generally employed.

A number of problems, of course, arise in connection with these services. Sometimes their rates of subscription are thought to be too high. Questions arise, too, as to whether they should take only "good lives."

These public medical services have been increasing rapidly in the last four years, and they are now known to cover about 600,000 persons in over 60 different services. Further, the London Public Medical Service has lately set up the London Public Medical Service Extension, which provides for middle-class families in the same way as the London Public Medical Service provides for working-class families. The service is governed by the Central Council of the London Public Medical Service with co-opted members. The service is open to all doctors whether they are members of the parent body or not. There are three different rates of subscription for subscribers to the service, one for those with incomes between £250-£375, one for those with incomes between £375-£475 and one for those with incomes between £475-£550. The rates for a family of four are respectively, £4; £4 10s.; and £5 per annum.

Insurance Against Doctors' Bills

Quite a large section of the population take out sickness insurance policies to enable them to meet their doctor's bills. A number of societies do this work. Two of the best known are the National Deposit Friendly Society and the Teachers' Provident Society, which have schemes whereby persons who insure themselves with them for medical benefit have their doctor's bills paid up to a certain amount when they are presented to the local officer of the society. In 1936 1,368,290 persons were entitled to medical benefit in this way through the National Deposit Friendly Society, and 57,592 through the Teachers' Provident Society.

PUBLIC SERVICE

Doctors Employed by Local Authorities

(*a*) *District Medical Officers*

District medical officers (formerly Poor Law medical officers) were originally appointed by the Boards of Guardians to render domiciliary medical services to the "sick poor." Since 1930 the service has been administered by the public assistance committees of the local authorities. These appointments are in the majority of cases held by general practitioners giving part time to their duties. The salary varies from area to area with the amount of work involved. In London up to £350 per annum is paid, in some areas the salary may be less than £100. These officers cannot in general be removed by the County or County Borough Council by whom they were appointed except with the consent of the Minister, but they possess no similar security in Scotland. The extent of the service, for example, in London County, can be gauged from the following figures. The service cost £40,024 in 1934, 51,200 persons consulted the general practitioners who act as part-time district medical officers, and 29,152 persons consulted the medical officers on the staff of the London County Council hospitals who do both domiciliary work and work at the medical relief stations.

In Cambridgeshire, Cornwall, Croydon, East Ham, East Suffolk, Glamorgan, Newcastle-on-Tyne, Warrington, Wigtownshire, Wiltshire, and some other areas, what is known as the "free choice of doctor" system has been introduced. In this way the Poor Law element in the service is reduced to a negligible quantity, since patients generally remain under their own doctor and continuity of treatment is thus secured. Further, free choice of doctor is a policy which in every aspect of medical practice the British Medical Association always advocate. Agreements are generally made for the general practitioners of the area to come on the panel for Poor Law cases. Payment from a central pool is made to the practitioners according to the services they render, or they receive a capitation fee in respect of each patient they treat. One advantage of this arrangement is that it should facilitate closer contact between the district medical officer and the medical officer of health, who should be in a position to co-ordinate the service with the other health services of the local authority. Certainly, it has obvious disadvantages. A few doctors who were not over-scrupulous could ruin the service by attracting to themselves all the patients in an area, or by paying unnecessary visits to patients reduce the amount of money available for other doctors from the central pool. Also it is often more expensive than the older system. For example, the cost to the Newcastle-on-Tyne City Corporation per patient treated by the part-time district medical officers was 3s. 7d. per head under the old system and 12s. 6d. under the free choice system, which includes a capitation fee of 5s. per quarter. However, not the whole of this rise was due to the change in the nature of the service. It was partly due to the increase of nearly 100 per cent in the number of patients who used the service. The capitation fee varies remarkably: from 25s. 6d. per annum in the rural areas of Cambridgeshire, which includes a payment for mileage, treatment and drugs, to 16s. per annum in East Ham. Generally the fee is nearer to the Cambridgeshire figure. The high capitation fee is due to the fact that a large number of the patients are old and need constant treatment.

In some places whole-time district medical officers are employed. In Glasgow in 1935 there were 27 whole-time district medical officers and 9 part-time officers. This has been justified on the score that numerous unwarranted admissions to hospitals were being made and that the cause was the perfunctory nature of the domiciliary service. It is hoped that under the present system the efficient method of record will enable latent disease to be detected. Since it is regarded as an encroachment on private practice, this procedure of appointing whole-time district medical officers is strongly opposed by the British Medical Association.

The Committee on the Scottish Health Services urged that an early decision as to the future of the service was necessary in view of these modern changes. In order to remove the connection of medical services with the Poor Law they were particularly desirous that local authorities should be given power to provide medical attendance to the necessitous poor, subject to the right of recovery of costs in suitable cases. In this way they thought the service could be merged into any extension of the general practitioner service designed to cover the whole population, and continuity of treatment secured under the supervision of the patient's family doctor.

Administrative and Other Appointments

The most important administrative medical appointment under a local authority is that of medical officer of health. He is responsible to the committees of the councils dealing with health problems for the various medical services which a local authority must statutorily run, and those which it chooses to run. In the case of a county borough the work of the medical officer of health includes the administration of the environmental services, the administration of the infectious disease service, the administration of a number of different kinds of hospitals and of the maternity and child welfare, including in many cases the new public midwifery service, and the tuberculosis and the venereal diseases services. He is also medical adviser to the public assistance committee. Except in the smaller areas the medical officer of health has a considerable medical staff working with him, such as assistant medical officers of health and tuberculosis officers. The medical superintendents of appropriated hospitals are also under his general direction in virtue of his office as adviser to the public health committee. The work of the sanitary inspector is subject to the general direction of the medical officer of health. But he need not be the officer ultimately responsible for the direction of all the health services, since the school medical service is sometimes outside his sphere of activity—an unfortunate and wasteful administrative arrangement which the Minister of Health is attempting to discourage.

Obviously the work of a medical officer of health is very responsible and requires considerable talents and a detailed training. Consequently, the Local Government Act 1933 (following previous enactments) for England and Wales requires that the medical officer of health of a borough, urban or rural district having a population of 50,000 or more must be the holder of a diploma in sanitary science, public health or State medicine; and empowers the Minister to make regulations prescribing the qualifications and duties of medical officers of health of boroughs and urban and rural districts and the mode of appointment of these officers. Further, as a result of the Local Government Acts of 1929 and 1933 for England and Wales, medical officers of health will gradually cease to be part-time men with a private practice. This, of course, now occurs only in the smaller districts. In most cases, the appointment of a medical officer of health restricted from engaging in private practice may not be made for a limited period, and such an officer may not be dismissed by the local authority except with the consent of the Minister, although the Minister may dismiss him. In Scotland no medical officer of health may be appointed without a diploma in public health. The Department of Health must give its permission before a dismissal. The salaries of medical officers of health range roughly from £800 to £2,000 per annum, with superannuation and holidays with pay.

There are various other medical officers serving local authorities on a whole or part-time basis. Since the Local Government Act 1929, complete information has not been collected by the central department concerning all these officers in England and Wales, but the figures in 1937 so far as they are available are set out below.

	England and Wales		Scotland	
	Full Time	Part Time	Full Time	Part Time
Medical officers of health	485	706	46	33
Assistant officers			121	21
Tuberculosis officers	c.400*		20	1
Doctors to maternity and child welfare clinics	...	...	30	15
Doctors to venereal diseases clinics	175*		18	1
Medical staff of public hospitals	...	...	146	141
District medical officers	...	...	28	725
School medical officers and assistants	275	1,183	43	199

A doctor may, of course, hold more than one part-time public appointment. The work of each is discussed in its appropriate place in the Report. The British Medical Association and the Society of Medical Officers of Health urge no medical practitioner to accept these appointments, unless he is training, at a salary of less than £600 per annum.

The Committee on the Scottish Health Services suggested that it might be advisable for the central department to interest itself in the actual appointment of medical officers of health. The Departmental Committee on the Qualifications, Recruitment, Training and Promotion of Local Government Officers doubted whether a medical training was the most suitable for much of the work that the medical officer of health undertook, and debated the question whether his technical and administrative functions could not be divided. There are obvious financial objections which deterred them from making any recommendations pressing for the appointment of both a technical and an administrative officer, but the matter will doubtless have to be considered again in the future.

Doctors Employed by Government Departments

Many government departments employ medical advisers in a variety of capacities; the numbers in 1936 are set out below.

	Ministry of Health	Welsh Board of Health	Dept. of Health for Scotland
Chief Medical Officer	1	—	1
Senior Medical Officers	6	—	—
Medical Officers	35	3	7
Divisional Medical Officers	5	—	—
Regional Medical Officers	31	3	2
Deputy Regional Medical Officers	33	2	6
Senior Dental Officer	1	—	2
Deputy Dental Officers	2	—	
Regional Dental Officers	9	1	

* Approximately.

	Board of Control	General Board for Control for Scotland
Senior Commissioners (Medical)	2	—
Commissioners and Deputies	12	6

	Board of Education	Scottish Education Dept.
Chief Medical Officer	1 (*Also Chief Medical Officer to the Ministry of Health*)	—
Senior Medical Officer	1	—
Medical Officers	5	—
Medical Inspectors	—	1

	Home Office—Prisons Dept.	Prisons Dept. for Scotland
Medical Officers	28	3

	Home Office Factory Dept.
Senior Medical Inspectors	1
Medical Inspectors	7

	Immigration Branch
Medical Inspectors	3

	Air Raids Precautions Dept.
Medical Instructors	16

	Board of Trade
Medical Inspectors	3

Others:

Medical Statistical Officer to the Registrar General.
Inspector of Anatomy for Scotland.
Medical Adviser to the National Health Insurance Joint Committee.
Medical Inspector to the Mines Department of the Board of Trade.
Medical Adviser to the Colonial Office.
Prisons Commissioner (Medical).
Medical Adviser to the Prisons Department for Scotland.

It might be said that all panel doctors are government employees. Certifying factory surgeons and "appointed" surgeons are in a particular relation to the Home Secretary, since they are appointed, but not paid, by him.

The Services

The following table sets out the number of medical practitioners employed in the forces as given in the 1937 Estimates.

Royal Navy		
Medical Officers		374
Royal Army Medical Corps.	At Home	344
	India	280
	Others Abroad	130
Royal Air Force Medical Service.		
Officers of Medical Branch		238
Recruiting Staff Medical Officers		12
Chemical Defence Experimental Station		1
Directorate of Medical Services		7

SPECIALISTS AND CONSULTANTS

Specialists and consultants are often recognised as having a particular status within the medical profession. Yet there is no very clear definition of who is a consultant or specialist. Some years ago the Ministry of Health, with the help of representatives of the profession, recognised certain criteria by which a practitioner's claim to specialist rank may be judged. The British Medical Association's "Proposals for a General Medical Service for the Nation," published in 1930, set them out again. They are:

(*a*) That the practitioner has held hospital or other appointments affording special opportunities for acquiring special skill and experience of the kind required for the performance of the service rendered, and has had actual recent practice in performing the service rendered or services of a similar character; or

(*b*) that he has had special academic or post-graduate study of a subject which comprises the service rendered and has had actual recent practice as aforesaid; or

(*c*) that he is generally recognised by other practitioners in the area as having special proficiency and experience in a subject which comprises the service rendered.

The broad position is that the majority of doctors are engaged in general or family practice without making any special claim to peculiar excellence in any individual department. None the less, some of these, either due to the length of their experience or because for some other reason they have gained the confidence of their fellows, have a local repute and are called in for consultation in difficult or obscure cases; and it may be that in favourable circumstances such a practitioner gives up general family practice and confines himself entirely to "consultation" work. Further, if the professional work which he thus undertakes is restricted to some particular part of the body he is very apt to be called by the public "a specialist," and he may act as such on the staff of the local hospital. In the larger towns, and especially where there are medical schools, the stage of general practice above-mentioned is often omitted. Here the young doctor gets an opportunity on the staff of the hospital and begins almost from the outset to confine his work to one particular department. He thus hopes to gain a repute which will bring him consultative work in medicine, surgery, midwifery or whatever kind of practice he cultivates. The "pure" consultants take no family practice and see patients only in association with the patient's own doctor. From this statement it will be seen that the terms "consultant" and "specialist," though much used in conversation and in individual inquiries, have no standard technical applications. Any practitioner who meets a colleague in reference to an individual patient is, for the time being a "consultant"; if this is the only kind of work he undertakes he is reasonably described as a "consulting" physician, surgeon, and so on; and whether he is named a "specialist" or not depends on the standard of those who select the term. It is noteworthy that the use of these terms does not necessarily imply any medical qualification.

Honorary appointments at voluntary hospitals do not, of course, bring any direct financial rewards, but they are essential to the success of the "pure" consultant. Recently, as is shown in Chapter VIII, the public hospitals have begun to pay consultants, usually on a sessional basis, for attending patients there. Nevertheless, almost all the consultant's income still comes from the patients who seek him in Harley Street or Rodney Street, or wherever this branch of the medical profession tends to congregate. It is also impossible to say what specialists and consultants earn. Three guineas is now the regular fee for a Harley Street consultation. But a young man will hardly keep himself for the first ten years he is there. A surgeon may be able to charge fess of 100 guineas for one operation and be earning in a year an amount that a leading counsel would covet. A physician will not make so much. But a surgeon's earning period is limited, since he rarely does much operative work after he is 60. Moreover, the public's taste in specialists varies, and so, consequently, does the specialist's income. A "slump" will affect Harley Street as much as the City, for the one, to a certain extent, lives on the other.

Obviously, the relations between the general practitioner and a specialist might become strained since the specialist, although he is the expert, is often only called in as an adviser to the general practitioner. This is, of course, desirable, since the specialist's particular bent may make him unable to make a proper judgment on the whole case. The British Medical Association have drawn up a strict ethical code regulating the conduct of specialists and general practitioners who are working together. Before the war, at least, specialists were usually only consulted on the advice of a general practitioner. Recently, however, there has been a tendency for the public to go straight to a specialist. Often this has led to the members of the public spending money unnecessarily on services they might have obtained more cheaply from their general practitioner, or in paying more than one specialist before they reach the one dealing with their disease, to whom their general practitioner might have sent them direct.

Modern developments have magnified the importance of the specialist. He has gradually taken over more and more of the work of the general practitioner. This tendency has been aggravated by the creation of specialist clinics by the local authorities and the opening of more and more out-patient departments. To some extent this development is essential in medicine, which is an ever-growing science, and in a world in which the division of labour is one of the most potent means of advance. However, as will be shown later this tendency may encroach too far upon the work of the general practitioner, who still has vital tasks to perform. The public also have been hypnotised by the word "specialist," and tremendous stress has been laid on the value of increasing the number of specialists in any service regardless of whether or not they are the right persons to do the work or whether in that particular field division of labour is desirable. These problems are discussed in regard to each particular service in their appropriate place in this report.

It remains true, however, that the specialist services could, if the money were available, be very much improved. Among the wage-earning class some may get specialist services from clinics, others from hospitals. These may be more than adequate in a large town; in other areas this is not necessarily the case. The Committee on the Scottish Health Services stated that the most urgent task at the moment was to save and strengthen the general practitioner services, but that specialist services and diagnostic aids were obviously vital to a proper health service. They foresaw developments on these lines when the health services were better co-ordinated. They particularly noticed as an interesting development the setting up of health centres by the Glasgow Corporation, where all its duties relating to child welfare, school health, tuberculosis and poor law medical services are performed. Into these schemes they thought the voluntary bodies should also be drawn. The financial problems involved in extending specialist services are further considered in Chapter VII.

MEDICAL PRACTICE AND THE HEALTH SERVICES

Owing to the enormous growth of the health services it has become necessary to re-examine and re-define the status of the medical practitioner. We have shown that an increasing number of qualified men and women are taking salaried public posts in various branches of the health services, while the number of "specialists" or consultants and the range of specialised institutions has also been growing. The specific problems raised by these tendencies are discussed as they arise in the various sections of this Report. The object of this section is to discuss the future role of general practice against the background of the health services as a whole. In order to form a view it is necessary first of all to establish what organisation, institution, person or group of persons should first attend to the needs of a patient. Should the out-patient departments of hospitals do this work, should the existing special clinics be elaborated to undertake it, or should the general practitioner, referring patients to specialists at his discretion, do it? This question is obviously fundamental.

Our view is that diagnosis is itself the first and most important of specialisms, and that the general practitioner should become recognised as the specialist in diagnosis. He alone sees the patient as a person living under certain conditions and not merely as a case. This gives a doctor a great advantage in judging the nature, cause and seriousness of the patient's illness, and either giving him the correct treatment, or allocating him to an agency which can provide it. The possible causes of ill-health are so intimately bound up with the way of life of the individual that it is impossible to have a satisfactory health service in which diagnosis and responsibility for treatment are undertaken in ignorance of the family and working background of the patient. On the other hand, the complexity of modern medicine is such that it becomes one of the most important functions of the general practitioner to make the best use of the specialist services available to him.

The patient who goes straight to a specialist, whether in Harley Street or a voluntary hospital, may be running a grave risk, since the specialist with no knowledge of his medical background, and trained to deal with only one group of diseases, may well waste time and money. This tendency on the part of the public "to fly to specialists on the least provocation" has, so the British Medical Association state in their 'Proposals for a General Medical Service for the Nation,' had serious repercussions on the profession, since "it encourages medical men and women to crowd into the various specialities without that long training in general or hospital practice and teaching which are the means of making the only real specialist or consultant—that is to say one recognised by his peers inside the profession." Excessive readiness to resort to specialist services conflicts with their proper functions. If hospital out-patient departments and wards are used by patients who could be better, or as well, treated in or near their homes, the valuable specialist services of the hospitals are being wasted and unnecessary expense is being incurred.

Nor can the hospital or the specialist render the close personal service which the general practitioner is able to give.

The Consultative Board on Medical and Allied Services of the Scottish Board of Health in a report published in 1920 summarised the same view in the following words: "We regard it as of primary importance that the organisation of the health service of the nation should be based on the family as the normal unit, and on the family doctor as the normal medical attendant and guardian. It is not for disease or diseases in the abstract that provision has to be made; but for persons liable to or suffering from disease. The first essential for the proper and efficient treatment of individual persons is, therefore, not institutional but personal service, such as can be rendered to the people in their own homes only by a family doctor who has the continuous care of their health; to whom they will naturally turn for advice and help in all matters pertaining thereto; who will afford them such professional services as he can render personally; and who will make it his duty to see that they obtain full advantage of all the further auxiliary services that may be otherwise provided."

Others, while accepting these principles, consider that the general practitioner's duty shou'd and could extend further than is implied in the above definition. Thus the Committee on the Scottish Health Services asked that the general practitioner should be the health adviser of the family, and summed up his role in the following words: "The general practitioner, acting normally as family health adviser, is an indispensable instrument of national health policy," and they added "without his assistance as health adviser and as a principal liaison between the homes of the people and the statutory medical services these services cannot in modern conditions function to the full extent as part of a comprehensive policy for promoting and safeguarding the health of the people."

For a variety of reasons general practitioners are rarely able in existing circumstances to fill the role thus marked out for them. Modern working-class practice has grown out of the old dispensary and "club" systems, which were concerned solely with the treatment of sickness. Under the National Health Insurance system a similar service has been extended to large numbers of persons who did not previously get any medical treatment and the original service has much improved in quality. Nevertheless, the panel service and the general practitioner service provided in working-class areas is not as efficient as it might be under different circumstances. The panel doctor, at any rate in large towns, often has neither the facilities nor the equipment which, as precise diagnosis becomes daily more possible, are necessary to provide an adequate service. As a result he passes on his patients to the hospital and specialised clinics and often enough he tends to become little more than an agent for signing certificates. These tendencies are strengthened where, owing to the low remuneration he receives or the circumstances of the area in which he lives, the practitioner is forced to undertake more work than he can conscientiously perform. The panel doctor's difficulties are often further accentuated by the lack of clerical assistance and by the difficulty of obtaining laboratory services.

Personal contact between the panel doctor and his patients is also often lost since the doctor and his family, fearing the social isolation of a poor urban area, live in more congenial surroundings while the doctor's work is done from a lock-up surgery. Not only is the panel doctor isolated from his patients; he is also isolated from his fellow-doctors. Instead of his medical and intellectual interests being stimulated by constant co-operation with members of the profession, as occurs in hospital practice, they tend to wilt in the solitude of general practice. The growth of public health services which do not always take the general practitioner sufficiently into their confidence to secure the carrying out of health advice is a further obstacle.

Apart, however, from the special difficulties of the panel doctor, there are more general factors to be considered. All present-day general practitioners have been trained to detect and cure sickness, the emphasis in their training being upon established disease rather than upon prevention of disease. There is, in fact, little literature or knowledge regarding individual preventive medicine, and even a rich patient who goes to his doctor and asks for a simple regular overhaul comparable to the examination of his teeth by his dentist in order to forestall any incipient trouble, must still be told that he is asking for an impossibility.

It has been very strongly represented to us that, owing to the enormous amount of ill-health in the community, it is incorrect to think of the general practitioner as an agent for promoting constructive health, since he has an almost impossible task in attempting to cope with actual sickness. It has also been pointed out to us that medical etiquette handicaps him in doing constructive health work, since he may not go to the patient and the patient comes to him not when he is well, but when he is sick. The old-fashioned family doctor could, in part, overcome this difficulty, since he did a considerable amount of midwifery and was able to follow up these cases and to supervise the general health of the children of a family. In some cases, particularly in middle-class practice, a general practitioner is still, as he used to be for the favoured few, the health adviser to the family. In many other cases he is called in only in case of trouble, with a scarcely disguised reluctance and lack of confidence which, it must be admitted, is not always unjustified. Or, worse still, he is regarded and encouraged to act as an oracle or wizard with gifts of a magic rather than a scientific nature. In view of what has been said it will be plain that we see no useful purpose in trying to plant the blame for deficiencies on general practitioners, on "specialists," on patients, or on any other class. Such an attempt will be unprofitable and misleading.

All authorities are at least agreed that the existing service rendered by general practitioners should be improved and made available for more persons. In Chapter VII we outline a scheme by which general practitioner services might at a very moderate cost be made almost universally available through an extension of National Health Insurance. At the same point we have proposed an extension of National Health Insurance to cover consultant services, which would help to make the panel practitioner's work more interesting, and to bring him into stimulating, but not competitive, contact with the consultant. This, however, implies a need for raising the status and competence of the general practitioner.

The nation requires a large body of well-educated and competent general practitioners gaining a reasonable livelihood and finding in their work interest and opportunities. To make general practice a dull routine, as apparently some would do, would mean that the best men would avoid it or get out of it as quickly as possible. The general practitioner, however well trained, cannot deal with every situation, but he ought to be encouraged to extend the limits of his competence as well as to recognise when, in any individual instance, these limits have been reached. There is equally a need for experienced physicians, surgeons, obstetricians and experts in various limited branches of practice (including clinical laboratory work) to be available for obscure or difficult cases, preferably through the medium of the general practitioner. Co-operation is required between these two groups, each recognising the special function of the other—a position most likely to be established by a common centre in which each group has an interest and plays some part. They must be backed by an efficient nursing service.

There is no necessity for a clash between public and private medical services, or between the work of the general practitioner and specialists, each being indispensable to the others. We must, however, face the fact that the individual private practitioner is in process of losing a part, and one of the most interesting and vital parts, of his function in competition with specialised agencies, often supported by subsidies or publicity or both. To prevent this tendency from going to extremes is the common interest of all the health services, and is also, we believe, in the public interest. In order to maintain himself in changing conditions the general practitioner must, however, justify his existence not merely in theory but in fact, and he must, moreover, find a more efficient economic basis for his work.

In the section on medical training on pages 135 to 140 and elsewhere, we have urged the need for a better intellectual equipment for the general practitioner, but he also needs a better physical equipment. Many practitioners have recognised this, for example, by partnership arrangements designed to create in place of a number of isolated individuals, a small team of doctors each to some extent specialising in one class of case, but still in close touch with the family of the patient and with local conditions, and having at their disposal diagnostic apparatus and premises which no one of them could afford to maintain. We do not intend to make any detailed proposals on possible lines of development, but it seems likely that the position of general practitioners could be very much strengthened, and public confidence in them fully restored, if they could evolve some acceptable system of working in local groups from well-equipped central dispensaries.

These centres would possess the latest diagnostic and therapeutic equipment and, perhaps, a small operating theatre and a properly-staffed pathological laboratory. A clerical staff, competent to keep the important medical records of such a centre, could be maintained. Some arrangement could doubtless be found to enable patients to reach these centres by the normal methods of transport. This would eliminate a certain amount of the travelling which doctors have to undertake, and give them more time to devote to their patients. An arrangement of this sort would remove the general practitioner from professional isolation and put him in congenial surroundings where he could utilise the knowledge and experience of his fellow-workers for the benefit of his own patients, and where he could undoubtedly develop his own interests and thus give reciprocal help to his colleagues. Such centres would obviously also give opportunities for bringing under the same roof some of the allied and ancillary professional health services described in the next chapter, and they might also be associated with the local hospital.

Recommendations on these lines were made by the Consultative Committee on Medical and Allied Services to the Welsh Board of Health nearly twenty years ago, and the idea has often been put forward in various forms. The Gloucestershire Medical Services scheme, described in Chapter XIV has, in fact, put some aspects of it into practice, and as we have noticed a number of private medical men and women have experimented on their own account in the same direction. Many difficulties remain to be solved, but it seems clear that the old-fashioned type of individual private practice or simple partnership is no longer able to maintain itself satisfactorily in the public confidence unless circumstances are specially favourable to it, and this places on the medical profession a responsibility for working out a new pattern capable of meeting the new needs.

VI. OTHER PROFESSIONAL HEALTH SERVICES

General Nursing: The Development of the Nursing Services—The Organisation of the Nursing Services—Professional Organisations—The Staffing of Hospitals—The Pay and Pensions of Hospital Nurses—Nursing in the Public Health Services—State Services—Nursing Homes—Private Nursing—Industrial Nursing—Problems of the Recruitment and Training of Nurses—Conclusion—**District Nursing:** Description of Work and Position in the Health Services—Local Organisation—Finance—Central Organisation—Relations with Local Authorities—District Nursing and Midwifery Services—Special Areas and Highlands and Islands—Adequacy—Conclusion—**Dental Services:** Historical Survey of Dentistry—Organisation of the Dental Profession—The Problem of Dental Health—The Dental Services of Great Britain—**Ophthalmic Services:** The Organisation of the Ophthalmic Services—The Provision of Ophthalmic Services—Conclusion—**The Pharmacy Services:** Organisation of the Pharmaceutical Profession—Provision for Pharmaceutical Services—**Other Medical Auxiliaries.**

In this chapter we deal with the organisation of the services of nurses, dentists, opticians, pharmacists and others who play a vital part in the health services. We consider their professional problems and their relationship to the public. In nearly every case this relationship is direct, but in the majority of cases it is provided through institutions or through the services of the local authorities. Inevitably we have had to postpone consideration of some of the problems involved in the provision of these services until we deal with the National Health Insurance system.

GENERAL NURSING

The Development of the Nursing Services

Before the Reformation, such nursing as existed in Great Britain was under the influence of the religious orders and was, on the whole, undertaken by the most cultured people of the day. In the sixteenth century, however, the orders were suppressed and no organised centres for nursing arose to replace them, so that the standard of nursing inevitably sank to a very low level. Three centuries passed before any serious attempt was made to improve the nursing services. In 1840, largely through the influence of Miss Elizabeth Fry, an institute of nursing was established which consisted of nursing sisters who worked among the poor, and twenty years later Florence Nightingale's great work was to revolutionise hospital nursing. In 1860 the Nightingale Training School was founded at St. Thomas's Hospital, and by the end of the century many training schools had been established, qualified nurses being entitled to certificates from the hospital in which they had trained. Miss Nightingale, however, always opposed any suggestion that qualified nurses should be State registered, as she considered this to be incompatible with the ideals of nursing. Her great aim was to train nurses efficiently in modern methods, while at the same time preserving the tradition of nursing as a vocation.

The movement for State registration made a step forward in 1902 when "a society for the State registration of trained nurses" was founded, but this society only achieved its ideal as late as 1919, after the foundation of the College of Nursing in 1916, when Parliament set up the General Nursing Councils to control the State registration of nurses. The Councils keep a register and only admit those nurses who have attended prescribed courses of training and passed certain examinations. Although State registration is not compulsory all nurses (except mental nurses) who complete their training sit for the State examinations, and registration is almost an essential qualification for hospital, institutional or public health appointments.

Nursing has become a highly-skilled profession needing peculiar qualities of character and intellect comparable, if dissimilar, to those demanded in other professions. It has ceased to be simply a "call" inspired by religious motives, or a service performed by untrained women. Yet the transition is not complete and many of the problems of securing good conditions of work, recruiting persons of suitable calibre, and training them remain unsolved.

In 1930 a strong Commission consisting of distinguished doctors, educationalists and others was set up by the *Lancet*, the well-known independent medical journal, "to inquire into the shortage of candidates trained and untrained for nursing the sick in general and special hospitals throughout the country, and to offer suggestions for making the service more attractive to women suitable for this necessary work." Its Report in 1932 called forcible attention to some of the anomalies still existing in the profession. A more limited survey was carried out in 1936 by the Scottish Departmental Committee on the Training of Nurses. In November 1937 the Minister of Health announced that a very strong interdepartmental committee, under the chairmanship of Lord Athlone, had been appointed to inquire into the recruitment, training, registration, and terms and conditions of service of nurses. A Scottish departmental committee has also been set up to cover the same field. The profession may be said therefore to be in a state of rapid transition, since each new report has led to improvements. Here we have been able to do no more than indicate some of the problems involved. We deal separately with the District Nursing Service in the next section.

The Organisation of the Nursing Services

The General Nursing Councils are responsible for keeping registers of nurses and for making rules regulating the conduct and examinations for those on its registers. The 1919 Acts set up three General Nursing Councils—for England and Wales, for Scotland, and one for Ireland, from which body the Irish Free State has since seceded. The General Nursing Council for England and Wales consists of 25 members, including representatives elected by the nursing profession and others appointed by the Minister of Health, the Board of Education and the Privy Council. It has power to set a standard of efficiency to which all nurses desiring State registration must attain. This it does by approving only certain hospitals as training schools, by insisting on a standard curriculum, and by conducting the examinations for State registration. The registers, which are maintained by the councils in the three countries, contain first a general part, and secondly five supplementary parts: for male nurses, for sick children's nurses, for infectious diseases nurses, for mental nurses, and for nurses trained in the nursing and training of feeble-minded and mentally deficient persons. Similar conditions obtain in Scotland.

For admission to the General Register a nurse must have had three years' training in a complete training school approved by the General Nursing Council, or three and a half years in associated hospitals, which together form a training school approved by the Council, or four years in affiliated hospitals, which together form a training school approved by the Council. The basis on which hospitals are classified is the amount of clinical material available and the facilities for teaching provided. The system of associated and affiliated hospitals gives trainees in small special hospitals opportunities of varied experience. For admission to the Supplementary Registers only, different periods and conditions of training are laid down. Thus, for training as a mental nurse, a sick children's nurse or as a nurse for mental defectives, three years are required, for training as a fever nurse, two years. Three alternatives are open for training as a male nurse, corresponding to those for the training of a general nurse (always a female). Provision is made whereby those on a Supplementary Register may train for admission to the General Register, and for the training of male nurses as nurses for mental patients and for mental defectives.

For nursing of mental patients there are two forms of qualification. The old examination and training of the Royal Medical Psychological Society was not amalgamated with the course laid down by the General Nursing Council in 1919, so that at present both exist and the former does not entitle a nurse to State registration.

Professional Organisations

The nursing profession has developed a number of organisations which set out to protect the interests of its members and which indirectly benefit the community by encouraging the suitable candidates to enter the profession. The College of Nursing, established in 1916, and given its charter in 1928, is an organisation of over 29,000 trained nurses with a council elected by its members, through which they are able to exercise their influence in the management of the profession. There is also a students' section with a membership of 6,000. It publishes a journal, and in a variety of ways assists nurses to improve their conditions of employment, and helps with regard to posts, although it has no official employment bureau. The college was instrumental in helping to secure State registration for nurses and it initiated and assisted in the establishment of the Federated Superannuation Scheme for Nurses and Hospital Officers, the registration of nursing homes, and the Nation's Fund for helping nurses when in need. It also secured exemption for nurses from compulsory contributions under the Unemployment Insurance Act, from which it considered they obtain no benefit.† It recommends minimum scales of salaries for nurses; tries to further a better distribution of nurses between different branches of the service and encourages post-certificate study.

The department of education of the college provides post-graduate courses in every branch of nursing and sets out to improve the methods of teaching and to educate leaders for posts of responsibility either in schools of nursing or in any public field in which the services of trained nurses are needed. In 1925 this department was approved by the Minister of Health for training health visitors, and to-day the facilities available there include courses in industrial nursing, in psychology and mental health, and in occupational therapy, while a fortnight's special course in public health and general nursing is usually held annually at headquarters and also arranged by local branches. Some of the courses are arranged in conjunction with two of the women's colleges of London University and the college arranges special courses of study for candidates preparing for the Diploma in Nursing of London University. It is unfortunate that more nurses cannot avail themselves of the educational advantages of the college.

---

† Male nurses are still insured against unemployment.

A few scholarships are awarded by the college to enable its members to undertake various courses. The International Courses offered by the Florence Nightingale International Foundation are also arranged through Bedford College in conjunction with the College of Nursing.

The conditions of membership are that nurses should either be on the General Register or must hold a certificate of three years' general training from an approved training school, or have passed a final State examination in general nursing under the Registration Acts. Registration in a supplementary part of the Register does not entitle a nurse to membership of the college.

The Royal British Nurses' Association, founded in 1893, is a philanthropic organisation concerned with the maintenance of closer relations between nurses, promoting schemes for their benefit and organising conferences and meetings.

The British College of Nurses, founded in 1926, and endowed by an anonymous donor, has a considerable membership and is also interested in the advancement of the education and of the social status of the profession.

The Staffing of Hospitals

It is customary for the nurse trainees in hospitals to give their services in the wards and to receive their training plus a small wage and board and lodgings. The training of nurses is undertaken in the voluntary and public (local authority) hospitals. From the time the probationer enters the training school of the hospital her services are fully used. Much domestic and other work is assigned to her, a certain amount of it unessential to her training, though some, of course, essential to it. Hospitals and the public should recognise that probationers are paying indirectly, if not directly, for their training, for, apart from the domestic work performed, much nursing is done in the second and third years, which, in the absence of student labour, would have to be allotted to trained nurses paid at skilled rates.

Besides the probationers, the recognised grades in the hospital service are staff nurse, sister, ward sister, sister in charge of special department, home sister, sister tutor, assistant matron and matron. The percentage of each grade of nurses varies, of course, in different hospitals.

Generally speaking, the proportion of nurses to patients may be said to be one to three. The College of Nursing, however, recommends that ideally it should be one to two and a half, including the administrative staff as well as those actually engaged in bedside nursing.

The training of nurses in the public hospitals differs slightly from that in voluntary hospitals because of the different types of cases in each. Some of the new public hospitals have as good facilities as the voluntary hospitals. It has been suggested that greater co-ordination is necessary between the two types of hospital in order to secure use of the facilities for probationers that are available in both. As a result of the "appropriation" of public assistance hospitals under the 1929 Local Government Acts, however, the training facilities in municipal general hospitals are rapidly approximating to those in voluntary hospitals.

In the L.C.C. hospitals experiments have been made in employing more orderlies to do the work that need not be done by skilled nurses and that does not benefit probationers. The Essex County Council has also a special scheme for the limited training of those who are only going to nurse the chronic sick.

In some institutions which are not recognised by the General Nursing Council for the purpose of training nurses, there is a tendency to employ "probationers," who later find that they have not qualified to sit for the State registration examination under the rules of the General Nursing Council. Sometimes also nurses who have not been fully trained are employed. The *Lancet* Report recommended that these hospitals should be staffed entirely by trained nurses and domestic workers, for only hospitals approved as training schools are justified in employing student labour.

◆

The Pay and Pensions of Hospital Nurses

The cost of training to a nurse is usually regarded as negligible, and her actual outlay is certainly very small. The probationer's services more than pay the hospital for her training, and few hospitals demand a premium or deposit, which in any case never exceeds £30. The salaries of fully qualified nurses, however, are low. The minimum salaries recommended by the College of Nursing are £65-£80 per annum for a staff nurse, and for a sister, in all hospitals with over 100 beds, £90-£150.

It is recognised that the limited financial resources of the voluntary hospitals have probably accounted in the past for the low range of salaries. The salaries quoted are, of course, in addition to emoluments such as board, lodging, laundry, and medical attention. In recent years there has been a growing recognition of the need for better accommodation for hospital nurses. In the public hospitals, in particular, large sums have been spent on new or extended nurses' homes and greater attention has been paid to the provision of such amenities as reading and recreation rooms.

In 1928 the Federated Superannuation Scheme for nurses was introduced, and is supported by hospitals with approximately 80 per cent of all the beds in voluntary hospitals in Great Britain, and by large numbers of other institutions and organisations, for example nursing associations and sanatoria.

For public hospitals, the effect of the Local Government Superannuation Act 1937 is that by 1939 every local authority will be compelled to have constituted a superannuation scheme with reciprocal rights. Similar arrangements have been made in Scotland. But there is no machinery for securing reciprocal rights as between voluntary and public hospitals.

Nursing in the Public Health Services

Nursing as a function of the public health service has been becoming increasingly important during the last ten years. It consists chiefly in the visiting of homes by trained nurses employed by the local authorities, to advise and assist in all matters of health. In particular, they carry out the provisions of the Maternity and Child Welfare Acts and visit cases of tuberculosis and mental deficiency, but the most important part of their work is its preventive and educational aspect. A whole-time health visitor is required to be a State registered nurse, and to hold the Health Visitor's Certificate of the Royal Sanitary Institute, the Central Midwives' Board Certificate, and sometimes a certificate of public health.

The College of Nursing asks for nurses in the public health service a starting salary of £250 with increments, and with higher scales for superintendents according to their responsibilities. The nurse in this case has to find everything except her out-of-pocket expenses.

In regard to school nurses, the qualifications required vary widely. Some authorities require nurses who have the Central Midwives' Board Certificate and other qualifications, whereas others do not even demand State registration. Salaries necessarily vary with the qualifications of the nurse. The function of the school nurse is to assist the school medical officer at medical inspections and "follow up" the cases afterwards. Her work is becoming increasingly important. Except in London and some other large towns, the post of school nurses and health visitor is very often combined.

The work for nurses in the public health service is one of the limited number of careers open to nurses which does not entail institutional life, and for this reason there ought not to be a shortage of candidates. The present difficulty in recruiting suitable candidates may be put down to the scale of salaries offered. The organised bodies of workers in the public health service consider that health visitors should be graded with sanitary inspectors for remuneration purposes.

State Services

The Queen Alexandra Royal Naval Nursing Service, the Imperial Military Nursing Service, and Princess Mary's Royal Air Force Nursing Service afford openings to fully qualified nurses. There are also the Ministry of Pensions Nursing Service and the Prison Nursing Service.

Nursing Homes

The Nursing Homes Registration Act came into force in 1928, and provided for the registration of nursing homes and their inspection by local authorities in England and Wales. This was an important step towards protecting the public against undesirable nursing homes, but it has not, unfortunately, eliminated the untrained nurse who still works in these homes. Salaries and conditions of work of registered nurses vary with the nature and quality of the nursing home.

Private Nursing

Remuneration in private nursing varies from 4 to 5 guineas a week with board (or £2 2s. additional payment without board) according to the scales of the College of Nursing, but a private nurse does not necessarily obtain this remuneration. In order to obtain regular work, a nurse usually finds it necessary to join a co-operative society, in which case she contributes a part of her earnings to the general fund. Constant employment is unusual in private nursing, most nurses not working more than about 39 weeks in the year. When deductions have been made for her co-operative contributions, a private nurse's salary is not likely to exceed £150 per annum, out of which she must often keep a room with a telephone.

Industrial Nursing

We have shown in Chapter III that this is a service of growing importance, since in any factory or undertaking where there is a danger of accidents a trained nurse is of very great value. Some of the problems of providing an adequate service are not dissimilar to those involved in providing an industrial medical service. For example, the question of giving small factories an adequate service is not yet solved, but a committee of the Midlands Institute of Industrial Affairs is considering it, and the College of Nursing has drawn up a memorandum on a scheme of its own and has collaborated with the Industrial Welfare Society in making it known. Employers also need education in the value of employing qualified nurses. The College of Nursing is providing courses for nurses who wish to take up this work, and refresher and part-time courses are provided at other centres.

Problems of the Recruitment and Training of Nurses

The nursing profession is one of the few in which at present the demand exceeds the supply. This is due partly to the steadily increasing demand for nurses, particularly since the development of public hospitals as a result of the 1929 reforms. In 1931 Dr. Bradford Hill estimated for the *Lancet* Commission that in England and Wales: "Taking all the hospitals together, one-fifth of them fail to secure suitable candidates as sisters, and one-half of them fail to secure staff nurses and probationers of the standard they require. The numerical deficiency is relatively small—that is to say, the number of nurses working is in most hospitals over 90 per cent of the full establishment. This is presumably because a number of nurses approximating to the full establishment is essential to the working of a hospital if all the wards are to remain open; but often the staff is maintained at the necessary strength only by the acceptance of candidates who are not up to the educational standard desired, or by the appointment of 'temporary' or 'assistant' nurses. This latter expedient is necessary in roughly one-half of the affiliated and fever hospitals, and of the general hospitals not approved as training schools, and is even necessary in one-fifth of the London and provincial voluntary hospitals approved as complete training schools." The worst shortage of probationers was found in the municipal hospitals, whereas for staff nurses the difficulty was greatest in the "Affiliated" and "Reciprocal" hospitals and among general hospitals not approved as training schools. The term "shortage of suitable candidates" seemed, however, to bear a different construction in different types of hospitals, those with the highest standards accepting no girls under 19 or upwards (often 20 or 21) and demanding a good education, while some took probationers at 16 with poor educational and other qualifications.

The *Lancet* Report showed that nursing did not attract enough girls from secondary schools and that many accepted candidates left the elementary schools at 14 and took up other work until they could become probationers at a hospital. As the report showed, the considerable wastage of candidates during the preliminary trial period and in the first year in hospital is evidence of the unsuitability of many candidates.

There seems to be general agreement that one of the chief hindrances to recruiting for the nursing profession is the gap between school and hospital. Most girls likely to take up nursing leave school at 16, and few approved hospitals admit them before they are 18, so that many possible candidates are obliged to start some other training or enter some other occupation that will accept them at 16. At present, one method of "bridging the gap" most generally adopted is that of an unofficial liaison between small non-approved hospitals and approved hospitals, the former accepting probationers at 16 and giving them some experience of practical nursing and ward work before passing them on to approved training schools. The years in these non-approved hospitals do not, however, count towards qualification.

The *Lancet* Report and the Report of the Scottish Departmental Committee on the Training of Nurses recommended that the first part of the State examination should be taken before the student nurse enters hospital, so as to enable her to concentrate more on practical nursing in the hospital and to avoid the dual strain of study and ward work. The examination being in theoretical subjects, the work for it can be done at school or at continuation classes. It would thus afford a profitable means of "bridging the gap." Some schemes to facilitate such a development have been instituted in England. In connection with the Manchester, Salford and Stretford Secondary School, girls over 14 who wish eventually to become hospital nurses or children's nurses are offered a course of continued education up to 18, which combines general education with practical arrangements. Middlesex County Council also provides facilities for enabling entrants to the profession to do theoretical work before they enter hospitals. Such schemes could be created elsewhere. It is also necessary that financial resources should be available to enable suitable candidates to continue their education in this way. In Scotland the General Nursing Council is implementing the recommendations of the Departmental Committee.

The system of affiliating hospitals for training purposes is also unsatisfactory. Because certain hospitals are "affiliated" to each other for training purposes, a probationer who has started a course of training in an approved hospital may only proceed to a hospital "affiliated" to that one and may have to wait a long time for a vacancy.

The discipline that student nurses must submit to when they are not on duty often seems hard. It has been suggested that where the provision of fresh accommodation for nurses is under consideration the possibility of giving some of them the alternative of living out, by the offer of non-resident allowances, should be explored. This, in fact, is now being tried in the L.C.C. hospitals, but it has some disadvantages. For example, L.C.C. hospitals are not often situated in areas where suitable lodgings are available.

The *Lancet* Report also strongly recommended that a redistribution of domestic work between nurses and wardmaids should take place and that sufficient wardmaids should be provided to relieve nurses from domestic duties not directly concerned with the patient.

"Long hours" is also a reason often given for the shortage of recruits, and the *Lancet* Report collected evidence that the quantity and quality of candidates for the profession were adversely affected by the long hours of duty. According to the *Lancet* Commission's Report, in about 50 per cent of the hospitals nurses work for 55-59 hours a week, and in many others for 60 to 69 hours. The daily hours worked by nurses were 10 to 11 in 26 per cent of the hospitals, 9 to 10 in 60 per cent, and 8 to 9 in 14 per cent. Conditions have undoubtedly improved in some hospitals since the publication of the Report, but they remain unsatisfactory in many others. A considerable reduction in the hours worked (which would probably have to be done by introducing the three-shift system) and more free time should enable nurses to "have outside interests" and make the profession a much more attractive one for the educated girl.

Conclusion

In hospitals, in public health work, in district nursing and in factories the work of doctors could not be carried on without the skilled assistance of nurses. The recovery of patients from an operation or an illness often depends almost entirely on skilled and attentive nursing. In public health and in the factories the nurses are doing more and more essential preventive work. Yet we have said enough to show that, vital as their function is, their conditions of service, and even their pay, are not adequate for the work they are expected to perform. Moreover, their conditions of life and their low pay, coupled with difficulties connected with training, often deter suitable candidates from entering the profession. It is to be hoped, therefore, that measures will be taken to improve these conditions and to overcome the problems of recruitment, after a thorough survey has been made by the inter-departmental committees.

DISTRICT NURSING

Description of Work and Position in the Health Services

An invaluable but little advertised service to the community is performed by about 8,000 district nurses in Great Britain. Without them much of the work of the general practitioner, particularly in isolated rural areas, would be impossible or extremely difficult. Often in emergency cases they do the essential work before the doctor arrives. Follow-up and after care work frequently falls on them and they are thus able to relieve the pressure on the hospitals and doctors. They visit the chronic invalid and the bedridden, enabling the doctors to devote their time to acute cases. They collaborate closely with the doctors and in the case of Queen's Nurses, complete co-operation is secured, since their rules prevent a nurse continuing to attend a patient unless a doctor is in attendance. As midwives they save the lives of many mothers and babies and protect many more. Serving as health visitors and school nurses, as they often do in rural areas, they guard the health of many of the children of the country. Often enough they in fact watch over the general health of the community they serve, as friendly advisers and educationalists.

The conditions in which these nurses live are far from easy. Although the normal day of a district nurse is not expected to exceed 8 hours she may be out at all hours and in all weathers.

The nurses, even in country areas, do not all have cars, yet their districts may be half a dozen miles across. According to the rules of the Queen's Institute of District Nursing, Queen's nurses in large towns must be lodged in special homes under a trained superintendent, which helps to ease the lot of some, although others prefer to live alone. Nor are the district nurses well paid. A Queen's nurse receives a salary of £70 during her first year of service, £80 during her second, thereafter rising to £100, with an allowance of 21s. per week for board and laundry. A uniform allowance of £8 per annum, a transport allowance and a free furnished cottage or rooms, fires, light and attendance are also given. If she is a certified midwife she gets an extra £10 per annum, and if she holds a health visitor's certificate another £5. This is all equal to about £200-£250 per annum. A trained nurse who is not a Queen's nurse, may earn as little as £180 per annum. The earnings of a village nurse midwife are generally similar.

Nevertheless, Queen's nurses, and some of the others, have had a very adequate training. A Queen's nurse has had a three years hospital training course and is registered by the State as a general nurse. She has also had six months training as a district nurse and passed an examination on district nursing. She may, of course, hold other certificates. There are about 4,000 Queen's nurses working in Great Britain now. A number of State registered nurses without specific training in district nursing work, which Queen's nurses obtain, are doing district nursing work. A village nurse-midwife who is often employed in country districts, where neither the work nor the financial situation of the Association would justify the employment of a Queen's nurse, is a certified midwife with training in district nursing and generally works under the close supervision of the county superintendent.

Nurses who have had three years hospital training but are not Queen's nurses are sometimes employed. There are a few "cottage benefit" nurses who are generally midwives but not trained nurses. These have probably had a brief period working in a cottage hospital.

District Nursing is organised on a voluntary basis. Originally it was financed largely by subscriptions and donations. Now a considerable proportion of its resources comes from those who use it, through contributory schemes and provident subscription schemes. In fact it has gone through a period of development comparable to that of the voluntary hospitals. Local authorities also assist it by paying for specific services. Most of the nurses in the country are employed by local district nursing associations, but some, of whom the most important group is formed by the Ranyard nurses in London, are employed by sectarian bodies. Others are employed by the Cottage Benefit Nursing Association. The associations are entirely independent of the State and of the local authorities. But they collaborate with them, and representatives of the local authorities are often members of the committees of the associations.

Local Organisation

A district nursing association generally covers a number of villages, an area of a town or possibly the whole town. In 1934 there were 3,545 associations affiliated directly or indirectly to the Queen's Institute in England and Wales. The association is an entirely voluntary body of subscribing members. It has an executive committee with honorary officers. On these officers falls the administrative work which is quite considerable, and includes raising funds, keeping in contact with the local authorities and acting as adviser to the nurses. Elsewhere there are more highly organised schemes. For example, in Birmingham a number of associations amalgamated, and there is now in most districts a federal scheme under the administration of a general council including representatives of the Public Assistance Committee and the Birmingham Hospitals Contributory Association. Consequently the work of the officers is less, for the nurses in 7 of the 10 areas live in homes under a nurse superintendent. A few areas in the counties of Leicestershire, Northumberland, Oxfordshire, Surrey, Warwickshire and the East Riding are served by branches of the Cottage Benefit Nursing Association. The purpose of this association is to supply resident nurses in the patient's home. It has obvious administrative difficulties, for it often entails the borrowing of nurses. The scheme was started about the time that district nursing came into vogue, but it is now of little importance and in Oxfordshire at least its branch also provides a district nursing service. In London some of the Ranyard and other nurses are run from mission and church centres.

Finance

The policy of associations varies in regard to finance. All rely on subscriptions and donations, but some have provident subscription schemes, subscribers to which receive the services of the nurse free and obtain midwifery services at a reduced fee. These subscriptions are generally graded in accordance with income. Collecting groups are formed in factories, women's meetings and home groups. Contributions in factories are generally about ½d. a week where the population is enough to provide a sufficiently large membership. Although these arrangements are on a small scale, where a real democracy is in existence they may have a valuable educational function. In some districts arrangements are made with hospital contributory schemes. These pay the association for treating their members either by a fee for a nurse's attendance or by a percentage of contributions or of the cost of treatment. The Queen's Institute has arrangements with some approved societies to include nursing services among additional benefits. Other associations charge for the nurse's visit. In Birmingham the charge is up to 3s. 6d. for non-members of the hospital contributory scheme. In the Birmingham association there are no small subscribing members, since the bulk of the income of the association comes from the Birmingham Hospital Contributory Association, but house to house collections are made in each area.

Most associations, too, make special efforts to raise funds by flag days, fêtes, jumble sales and admission fees to notable private gardens. Nor are they left entirely to their own resources, for local authorities grant subsidies for the provision of midwifery services in their areas, and will probably become more generous under the new Midwifery Acts. Under the Public Health Act 1936, all local authorities in England and Wales (except the L.C.C.) have power to subsidise general nursing in their areas. In Scotland, associations beyond the Highland line receive direct grants from the Highlands and Islands (Medical Service) Fund. The Commissioners for Special Areas have also made grants to nursing associations. The importance of payments by users of the service and of local government grants can be gauged from the fact that out of a total income of approximately £25,460 in 1934 the Norfolk associations supplying information to the Queen's Institute Survey received 31 per cent from users through patients' payments and provident subscriptions and 24 per cent from grants. For the whole of England and Wales the total income of these associations in 1934 was £1,059,668, divided as follows:

	£	Per cent
Voluntary subscriptions and donations	264,538	25
Grants	181,221	17
Other non-beneficiary sources ..	197,797	19
Patients' payments	162,918	15
Provident subscriptions	253,193	24
TOTAL	£1,059,667	100

Central Organisation

District nursing associations in rural areas are generally affiliated to a county association. These associations carry out inspections, maintain relations with the local authorities, assist training schemes and keep emergency nurses on their staff. In the county boroughs and towns the practice varies. Sometimes the associations remain independent or unite under a federal scheme for the town; sometimes they affiliate with the county associations. Out of 95 administrative counties in Great Britain there are 79 with associations. (Actually there are only 77 separate associations, for two of them cover two counties.) District nursing associations which employ Queen's nurses, and their own superintendent, may affiliate with the Queen's Institute of District Nursing. In Great Britain 1,678 district associations employing Queen's nurses are affiliated. Also 66 county associations are affiliated. Thus, even if a local association does not employ a Queen's nurse, it may be linked to the Institute through the county association.

The Queen's Institute of District Nursing was founded in 1887 as a result of the Women's Jubilee Offering, when the idea of providing a district nursing service was growing. Since then it has done yeoman service in pioneering district nursing throughout the country. The Institute aids training and inspects and supervises its nurses. These nurses, as has been explained, must undergo a prescribed training and be employed under stated rules. In 1934 the Institute carried out a valuable survey of the provision for district nursing in England and Wales. The Institute has a central council in London, with branches and separate councils in Ireland and Scotland.

Relations with Local Authorities

In some areas the local authorities have highly developed services and therefore do not require the services of the district nurses in their statutory work. Generally the local authorities' services are a development of the pioneering work of the associations. In other cases, particularly in rural areas, the district nurses do most of the local authorities' work.

Under the Poor Law Acts of 1879 and 1930 and the corresponding Acts in Scotland, the Public Assistance authorities may make grants to associations for the purpose of securing the proper nursing of necessitous cases. They also have power to appoint nurses for this purpose, but it is very rarely exercised. The method of making the grant varies from so much per case to a weighted block grant. In London as much as £6,800 per annum is distributed through the Central Council for District Nursing in London. In England and Wales local authorities now have power to subsidise nursing associations.

Local authorities in England and Wales may also make grants under the Public Health Acts to associations for the nursing of a number of notifiable diseases. These diseases include influenza, pneumonia, measles, ringworm, chicken-pox, and all complications in maternity and child welfare cases.

Such work as "health visiting" under the Maternity and Child Welfare Act 1918 and later Acts is sometimes done by associations for local authorities. In 1936 2,448 out of 5,780 health visitors in England and Wales were employed by voluntary agencies, but not all of these were district nurses. However, those voluntarily employed only devoted one-fifth of their time to "health visiting." This work is most usually done by district nursing associations in rural areas and small towns.

School nursing, which owes its origin to the early efforts of the associations, is still occasionally done by them in rural areas for the education authorities, who employ nurses to attend at the schools with the doctor and visit the children in their homes.

In Scotland, health visiting is carried out under the statutory powers contained in the Notification of Births (Extension) Act 1915. In 1936 there were approximately 1,085 nurses employed by local authorities as health visitors or school nurses. Of these, 623 were district nurses devoting only part of their time to public health duties.

District Nursing and Midwifery Services

Local authorities sometimes assist nursing associations by making grants for the training of midwives. In England and Wales since 1918, local authorities have also directly subsidised district nursing associations undertaking both midwifery and maternity nursing work. This is generally in rural areas, for in urban areas the associations do not often do maternity work. For example, county councils have often assisted financially in the foundation of new district nursing associations and they pay a portion of the salary of the county superintendent of nurses, when she is also appointed inspector of midwives. They also, of course, make specific grants for services or pay per case for work done. Some associations employ separate nurses as midwives and, whether they receive grants or not, associations generally charge 20s. to 42s. for their maternity services. It will be recalled that the minimum maternity benefit under the National Health Insurance Scheme is £2, or £4 if both parents are insured.

Midwifery has already brought the local authorities and the associations into close touch. The new Midwives Act 1936 will tighten the bond, for under it there is to be full co-operation with the voluntary organisation for the provision of an adequate salaried midwifery service.

In Scotland, outside the Highlands and Islands, a good deal of midwifery, including maternity nursing, is done by district nursing associations. Under the Maternity Services (Scotland) Act 1937, the provisions of which are discussed in Chapter III, an extension of the services of the district nursing associations is not improbable, under agreement with the local authorities.

Special Areas and Highlands and Islands

The Commissioners for Special Areas in both England and Wales and Scotland have made grants to nursing associations for the purpose of maintaining and extending the nursing services. In County Durham, for example, 58 additional nurses were needed, and the County Nursing Association was offered £110 for each additional nurse employed. In South Wales 93 additional nurses were needed. In Scotland, assistance has been given to associations in the counties of Ayr, Dumbarton, Renfrew, Lanark, Stirling and West Lothian.

The Highlands and Islands (Medical Services) Fund grants about £19,000 per year to nursing associations in the Highlands and Islands area. But although 200 nurses are at work, the service is not yet adequate. The work, moreover, and conditions of life are hard, and the nurses are not yet all supplied with cars, nor, according to the Committee on the Scottish Health Services, have they in some cases adequate accommodation. However, the combination of the work of nurse and doctor in these isolated areas is regarded as extremely effective.

Adequacy

The Queen's Institute of District Nursing in 1934 carried out a survey of the provision of the general district nursing services in England and Wales (this did not deal with midwifery and maternity nursing). It was found that 95 per cent of the population was within areas served by district nursing associations. But, although 7,170 nurses were employed, another 1,625 were considered necessary to complete the service in England and Wales. In the administrative counties of Wales only 84 per cent of the population had a nursing service. This, however, has been partially remedied, particularly in Glamorganshire, by the grants of the Commissioner for Special Areas. In London County as many as 211 nurses were required to complete the service. Anglesey, alone of all the English and Welsh counties, was considered adequately supplied with nurses. The Institute's method of calculating adequacy was based on the estimate that where a nurse combined public health work, such as health visiting, school nursing, and midwifery and general nursing, then one nurse per 3,000 of the population was sufficient; if she combined midwifery, and general nursing, one nurse per 5,000 or 6,000; and if she only did general nursing, one nurse per 7,000 to 9,000. But they also took into account the geographical conditions of the county served, and the amount of travelling necessary for a nurse to carry out her work. The Committee on the Scottish Health Services found that in Scotland there was a serious shortage of district nurses, and they urged that general powers to aid and encourage nursing services should be given to the local authorities. The Scottish local authorities, unlike those in England and Wales, are without such powers. But, as already stated, the operation of the Maternity Services (Scotland) Act 1937 may lead to a more extensive use of district nursing associations by local authorities in Scotland.

Conclusion

It is not too much to say that without the district nursing service the work of the general practitioners would be very much more difficult than it is now. It is obvious, therefore, that it is extremely important that any gaps in the service should be rapidly filled. Despite the excellent work of the voluntary associations, there is still room for considerably closer co-operation with the other national health services. This may be particularly true of the financial side of these organisations since the method of raising funds by collecting weekly provident subscriptions is often extremely wasteful. Already in some areas the co-operation between nursing associations and hospital contributory schemes and between nursing associations and approved societies is eliminating some of this waste. This problem will be further considered in Chapter XVI, where the scope of voluntary services will also be discussed.

DENTAL SERVICES

Historical Survey of Dentistry

Dentistry in Great Britain has only very slowly achieved the dignity of a profession. Tooth drawing was considered to be a comparatively simple operation, which could be performed without much need of skill, and was for a long time the function of the barber. However, after 1700, and particularly in the latter half of the eighteenth century, important advances were made in the study of dentistry, and gradually a certain number of medical men specialised in dental surgery. By 1800 there were numbers of skilled dental surgeons, and dentistry was being taught at Guy's Hospital, but there were also very large numbers of men who were not doctors, some skilled and some unskilled, who practised dentistry. This difference in status between those who were doctors and those who were not probably prevented dentists from drawing together and forming a professional body. As early as 1840 some prominent dentists began a movement to exclude unskilled men from the right to practise. This struggle lasted for nearly 40 years and achieved partial success with the passing of the Dentists' Act 1878.

The Dentists' Act 1878 empowered the General Medical Council to keep a register of dentists and to supervise an examination system. This Act merely protected the title of "dentist" and "dental practitioner" and did not make illegal dental practice by unqualified and unregistered men, who were able therefore to gain large practices. The Act admitted to the register those who were in *bona fide* practice at that date, as well as those who had academic qualifications. In the first register there were 5,289 persons, of whom 76 per cent were admitted for having been in *bona fide* practice. In 1918, 5,524 persons were on the register, of whom 72 per cent were qualified persons.

Those excluded from the register after 1878 because they lacked qualifications varied from relatively skilled men to the almost entirely unskilled tooth extractors. Men without academic qualifications, except those who had been admitted to the register in 1878, were excluded from the British Dental Association, a voluntary association formed in 1880. So the better type of unregistered dentists formed themselves into a society in 1893, which since 1913 has been known as the Incorporated Dental Society. The Society had an entrance examination of its own and imposed a professional code on its members.

In the pre-war years it was becoming increasingly obvious that some reform of the dental services was needed. A position in which there were nearly as many unregistered men as registered men practising, could not be regarded as satisfactory. In 1918 a Departmental Committee was set up to inquire into "the extent and gravity of the evils of dental practice by persons not qualified under the Dentists' Act." The Committee's report was strongly in favour of reform, but its implementation was not simple, for the legislature generally adopts the principle that a man's livelihood shall not be taken away by an Act of Parliament. Moreover, if an Act had been passed restricting the right to practise to registered men, their numbers would have been wholly inadequate to serve the community. Finally, in 1921, an Act was passed definitely prohibiting the practice* of dentistry except by duly registered medical or dental practitioners. An exception was made in respect of unregistered men employed to do minor dental work in a public dental service. Registration was to be permissible for certain classes of people in addition to those holding the diploma of one of the recognised licensing bodies. These classes of people were, firstly, members of the Incorporated Dental Society; secondly, those who for five years in the period 1914-1921 had been practising dentistry; thirdly, those who were practising dentistry at the time of the passing of the Act and who succeeded in passing a prescribed examination within 2 years; and fourthly, recognised chemists and druggists who had a substantial practice in dentistry which included all the usual dental operations.

Organisation of the Dental Profession

While the Act of 1878 was administered by the General Medical Council, the Act of 1921 set up the Dental Board of the United Kingdom. The Dental Board which, subject to the control of the General Medical Council,† is responsible for the discipline of the profession, has 13 members. The Chairman is appointed by the Privy Council and the remaining 12 are appointed by the General Medical Council, Government Departments and registered dental practitioners. The Dental Board inquires into cases of unprofessional conduct and it keeps the register of dentists, with the names, addresses and qualifications, if any, of those registered. The Board may not suspend, or erase names on the register, but may only recommend cases for disciplinary action by the General Medical Council. There is an appeal to the High Court against decisions of the General Medical Council in relation to dentists, although not for doctors. All regulations made by the Board require the approval of the General Medical Council and the Council alone has control over the licensing bodies and the education of dentists. Qualifications such as are acceptable for registration can be obtained at 12 universities in the British Isles and 3 Royal Colleges of Surgeons, and from the Royal Faculty of Physicians and Surgeons of Glasgow. Registration as a dental practitioner now entails at least four years' professional training, of which at least two must be spent at a dental hospital or at the dental department of a general hospital recognised by the licensing body. As a result of the Act of 1921, 8,000 persons without academic qualifications were admitted to the Dental Register, but the proportion of qualified to unqualified men has been constantly rising. On the Dental Register for 1937 there are 14,706 persons. Of these 57.07 per cent hold academic qualifications.

---

* This gives dentists a more privileged position than doctors since the medical acts do not prohibit the practice of medicine by unqualified men.

† For the purpose of the administration of the Dentists' Act 1878 and the Act of 1921 three registered dental practitioners are added to the G.M.C. by the Privy Council.

In 1935 the Board's income was approximately £36,000. It initiates research, makes grants to dental schools, gives loans and bursaries for students and institutes prosecutions for illegal practice. In 1935 it spent £21,000 on bursaries and equipment in dental schools, and £4,500 on research; it also spent £4,000 on dental health education in the form of pamphlets, advertisements and films for school children. The revenue of the Board is derived from fees paid to it by dentists.

The British Dental Association, although it admitted to its ranks the "Dentists 1878," did not admit the "Dentists 1921," who form the greater part of the two other professional associations—the Incorporated Dental Society and the Public Dental Association. There is an Advisory Council of equal numbers of representatives of each organisation, through the medium of which concerted action is possible.

The Problem of Dental Health

Dental caries, or dental decay as it is commonly called, is a very difficult disease to combat. It is present in the vast majority of people and it is estimated that about 95 per cent of the elementary school population is subject to it. Striking evidence of the extent of dental disease is given in the Report of the Health of the Navy 1934, and the Report of the Health of the Army 1934, in which it is stated that 96.8 per cent and 98 per cent respectively of the recruits for these services required dental treatment. In the Air Force 5.1 fillings was the average requirement per accepted recruit, according to the Health of the Air Force 1934. One of the most frequent causes for the rejection of recruits is dental disease. There is comparatively little positive evidence as to its causation. Certain rare people are relatively immune to it, and valuable research work is being done in an effort to discover the causes of such immunity. Dietary is recognised as being the predisposing cause of dental caries in civilised countries. Sir George Newman is reported in the *British Dental Journal* as saying: "Dietary indubitably plays a vital part in the sound condition of the teeth—but many healthy and adequately fed people have dental caries. Inadequate food and consequent poor health encourages caries."

Dental disease undoubtedly is the cause of a considerable amount of ill-health, including toxic neurasthenia, gastro-intestinal affections, and the more remote skin, eye and nervous conditions, besides a great deal of unnecessary suffering.

The richer sections of the population go to dentists in private practice and pay substantial fees. But the poorer sections have not yet come to realise the importance of dental health, having perhaps more obvious evils to combat. A quotation from the Report of the Chief Medical Officer to the Ministry of Health 1933 illustrates this: "The large bulk of the population, particularly amongst the industrial classes, is so accustomed to conditions of dental disease in themselves and their neighbours, and so little convinced that these conditions bear any relation to general health that, even if adequate dental services for all classes could be provided immediately, it is unlikely that more than a small percentage of those in need of it would avail themselves of the opportunity of obtaining dental treatment. Even when pain or some other reason indicates the necessity of a visit to the dentist, the only form of treatment which is considered, or which is acceptable, is, in a very large number of cases, the extraction of the offending teeth." Unfortunately it is frequently true that, through lack of care, extraction is indeed the only remedy. In this same report the Chief Medical Officer mentions that one hopeful sign is that in the four years 1930-34, the average number of fillings to each insured person who received treatment has risen, whilst the number of dentures has fallen.

The Dental Services of Great Britain

Dental services can be had in a variety of ways, in Great Britain, apart from those provided by private practitioners. Over 3,000 maternity and child welfare clinics and 1,600 ante-natal clinics in England and Wales provide dental treatment. Under the school medical service there are the equivalent of 705 full-time dentists and over 1,500 dental clinics. Treatment is available at dental hospitals and in the out-patient departments of most general hospitals, and in municipal clinics, while Public Assistance Committees generally have arrangements for giving treatment. Finally, there is dental service given as an additional benefit under the National Health Insurance Scheme. For the many people who come under none of the services mentioned above, there are various charitable organisations which can be approached for assistance in necessitous cases.

School Dental Service

Since dental caries is known to spread rapidly among young children, the importance of the school dental service cannot be over-emphasised. The Chief Medical Officer of the Board of Education in his Annual Report for 1932 said: "There can be no doubt that a substantial increase in expenditure (on dental work in schools) would not only result in sorely needed extension of that service, at present little more than initiated in most educational areas, but it would be definitely economical in the sense of ensuring the ultimate value of the preliminary inspection and treatment of the teeth."

In January 1936 the Board of Education in its Circular 1444 to local educational authorities entitled 'Administrative Programme of Educational Development,' stated: "The School Dental Service is seriously incomplete in most parts of the country. Authorities should aim at securing an initial dental inspection of every child on its entry into school life, to be followed by an annual re-examination until the child ceases to attend school. On this basis the Board estimate that, with a normal number of acceptances for treatment, a minimum standard should consist of one dentist for 5,000 children in an urban area and 4,000 children in a rural area, although this is insufficient where a high percentage of parents accept treatment for their children. The Board look to authorities to examine their present arrangements with a view to securing that their dental staff does not fall short of the requirements of their areas."

It is worth remarking that most middle-class parents would hardly be satisfied if their children only saw a dentist once a year. Unfortunately the Annual Report of the L.C.C. 1935 summarises one of the chief difficulties in connection with the services: "The greatest difficulty is still to be found in persuading parents to accept early treatment, especially when children are apparently suffering no inconvenience." This is partly due to the fact that charges are made for treatment. But these are remitted or partially remitted for necessitous cases. In 1935 in England and Wales 3,366,818 elementary school children out of 4,748,453 were dentally inspected, and 2,290,404 required treatment, but only 64.4 per cent of these actually received it. The time spent by school dentists on this work amounted to the equivalent of one full time dentist to every 7,600 children.

Children under 5 get little attention paid to their teeth after they cease to be connected with an infant welfare centre, unless they happen to be among the small minority attending nursery schools or nursery classes.

In Scotland the situation is worse than it is in England and Wales. Only 215,564 children out of 633,284 were examined in 1936. The number of dentists working whole-time was 51, and 35 part-time, which is the equivalent of one dentist for every 12,000 on the school register. The Committee on the Scottish Health Services urged that the Scottish service should be improved until it included the annual dental examination of every child.

Dental Benefit Under the National Health Insurance Scheme

Dental benefit is the most important of the additional treatment benefits which may be offered by an Approved Society. In 1936 the amount allocated for expenditure on it by approved societies was £2,473,000. This covered societies with a membership of 13,056,000 persons. But a contributor is only entitled to receive additional treatment benefits after he has been a member of the society for, on an average, two and a half years. As a result the gap between the dental supervision obtained at school and that obtained under National Health Insurance is prolonged for those who enter insurance until they are nearly 19. But under the National Health Insurance (Juvenile Contributors and Young Persons) Bill, the period during which a person is a juvenile contributor will count towards qualification for additional treatment benefits. Dental benefit is administered by the approved societies subject to compliance with the Dental Benefit Regulations.* The Dental Benefit Council, which is set up under the Regulations, is responsible for making arrangements for securing to those members of societies who are entitled to dental benefit, a satisfactory service of dental treatment and for exercising, subject to the general responsibility of the Minister of Health and the Secretary of State for Scotland, supervision over the administration of the benefit. The composition of the Council is a Chairman, appointed by the National Health Insurance Joint Committee, 12 dentists, 12 representatives of approved societies, 3 members appointed by the Ministry of Health, and 1 by the Department of Health for Scotland, and six additional members appointed by the National Health Insurance Joint Committee, of whom half must be dentists and half representatives of approved societies.

Approved societies must fix a proportion of the cost of dental treatment to be paid by the society. The proportion must be at least half the cost of the treatment and where the whole cost is under 10s. the society must pay the whole. There is no panel of insurance dentists; members are free to go to any dentist who agrees to provide treatment under the conditions laid down by the Dental Benefit Regulations except where the dentist has been declared unsuitable for service in connection with dental benefit following an inquiry by the central department. One of these conditions is that the "dentists shall employ a proper degree of skill and attention (not being less than he would apply in the case of a private patient)." A maximum scale of fees which the dentist must not exceed is prescribed in the Regulations. This scale gives a detailed list of charges for the various possible forms of treatment, and lays down standards of quality for the materials which may be used.

---

* A medical practitioner who is not a registered dental practitioner may not give additional dental benefit to insured persons.

In 1927 the Ministry of Health set up a service of Regional Dental Officers to assist the societies or the dentists when in doubt as to particular cases. For example, if a society does not think that a particular treatment is necessary it may get the Regional Dental Officer to inspect the patient. If any disagreement arises between a dentist and a society as to whether there has been any failure on the part of either dentist or society to abide by the Regulations, a referee and a dental assessor may be appointed by the Dental Benefit Council to hold an inquiry. Appeal beyond the referee may be made to an Appeals Committee. (In Scotland, instead of a single referee, there is a "Reference Committee" fulfilling the same function). If the Council considers that there is a *prima facie* case for holding an inquiry as to whether a dentist is unsuitable for service in connection with dental benefit, they may make a representation to the Minister of Health or the Secretary of State for Scotland, who may order such an inquiry to be held.

Other Dental Services

There are large numbers of insured workers whose societies do not pay dental benefit; there are also Deposit Contributors and many millions of uninsured people who may require dental treatment. There exist various agencies which assist certain groups or classes of these people to obtain dental treatment. Families dependent on Public Assistance Committees may apply to the Relieving Officer for a "dental letter," and thus obtain treatment or dentures free of charge. But, in fact, extractions only seem to be dealt with in this way, and no preventive work is done. Tubercular patients in some districts are able to obtain treatment through municipal clinics.

Many voluntary hospitals have dental clinics to which admission is either free or by letter or recommendation. A few hospitals treat only people who are already their patients. The charge for dentures is usually about £4 or £5, and the amount to be paid by the patient is decided by the almoner where one is employed. In two London boroughs municipal clinics are provided and charges varying with means are levied.

Voluntary insurance is playing an increasingly important part in providing for hospital treatment, and, incidentally, for dental treatment in Great Britain. The British Hospitals Contributory Schemes Association includes 23 affiliated schemes which pay dental benefit and which cover approximately 2,300,000 people. One of these affiliated schemes, the Hospital Savings Association, has a membership of 1½ millions, mostly in Greater London. Benefit is always confined in these cases to the actual subscriber. Nor do these schemes always carry the whole cost of treatment and the supply of dentures. Thus, the Hospital Savings Association pays only half the cost falling on the patient. For example, if a subscriber incurred an expenditure of £4 and his approved society paid £2, the Hospital Savings Association would only pay £1.

The Charity Organisation Society frequently helps with dental cases, after making exhaustive inquiries into the circumstances of the family. Other societies which may be approached for help for dental cases are the Ivory Cross and the Royal Surgical Aid Society.

The question whether dental benefit should be made a statutory benefit and extended to dependants, under the National Health Insurance Scheme, is discussed in Chapter VII. It is shown there that it would be costly. Moreover, the difficulty of introducing would be enhanced, since there is probably a shortage of dentists in the country.

OPHTHALMIC SERVICES

The Organisation of the Ophthalmic Services

Scientific treatment of the eyes dates from the middle of the nineteenth century, when two instruments, the ophthalmoscope and the ophthalmometer, were invented. These instruments made possible a detailed examination of the eye, and accurate treatment of refractive errors. As a result of this advance, ophthalmology developed as a special branch of medicine, and those who specialised in it became known as "oculists." However, spectacle makers, whose trade dated back to the seventeenth century or before, had always considered themselves to be more than mere craftsmen and shopkeepers. The scientific advances of the nineteenth century inspired them to organise themselves on professional lines, with the aim of showing themselves to be qualified to examine the eyes, as well as to make spectacles. They were generally described as "opticians." In 1895 the British Optical Association was founded, and it required candidates for membership to pass an examination which included sight-testing. Similarly, the Worshipful Company of Spectacle Makers began in 1898 to award diplomas to those who passed an examination. The Worshipful Company, being a professional organisation, did not look after the trading interests of its members. So in 1905 yet a third society was formed, called the Institute of Ophthalmic Opticians. The Institute did not hold examinations of its own, but was designed to protect the interests of those holding diplomas either of the British Optical Association or of the Worshipful Company. These three societies made several attempts to induce the State to institute a State register of opticians, which would include only their members and which, by restricting the right to prescribe to registered opticians and oculists, would implicitly recognise their equality.

The chief obstacle to the success of the opticians in these attempts was the sustained opposition of the medical profession. It is the opinion of the medical profession as a whole that, while competent to measure and correct refractive errors, the optician is not competent to treat diseases of the eye or to diagnose troubles, other than errors of refraction, which give rise to symptoms affecting the eyes. In answer to this the optician claims that, though he may not be competent to treat diseases of the eye, he is competent to detect the presence of disease and to send the patient to a medical practitioner with ophthalmic qualifications. In order to support their contention, the Ophthalmic Committee of the British Medical Association made an analysis in 1934 and again in February 1936 of approximately 10,000 cases submitted to medical men with ophthalmic qualifications under the scheme of the National Ophthalmic Treatment Board. In the first analysis, 29.15 per cent of the patients showed errors of refraction in addition to other diseased conditions, many of a serious nature, while 5.75 per cent of patients had no error of refraction, but showed signs of other diseased conditions. Figures were then obtained from certain approved societies whose members had gone direct to sight-testing opticians. They reported that only an average of 3 per cent of their patients were found to have diseases of the eye or unsatisfactory conditions, other than errors of refraction. In comparing these figures it must be borne in mind that every insured person has to be seen by his own insurance doctor before he can receive ophthalmic benefit, and many of the patients referred to the National Ophthalmic Treatment Board were sent at the instance of their doctors because there appeared to be something unusual requiring the attention of a medical eye specialist. The second analysis made by the Ophthalmic Committee was on the same lines as the first, and produced results very similar to those of the first inquiry. 27.88 per cent of the patients showed ocular disturbances in addition to refraction, 7.76 per cent had disturbances without a refractive error.

The controversy between oculists and opticians has become of increasing importance since the introduction of National Health Insurance, because "ophthalmic benefit" is one of the most usual "additional benefits." The benefit consists of the payment of the whole or any part of the cost of ophthalmic treatment and the whole or any part of the cost of optical appliances. As regards ophthalmic treatment, this can be given only by a doctor with special experience of ophthalmic work. It is the arrangements for the testing of sight of, and the supply of glasses to, insured persons which form the subject of controversy. Direct resort to an optician is regarded by many responsible people as being unsatisfactory; a quotation from the Report of the Departmental Committee on the Cause and Prevention of Blindness illustrates this: "We are of the opinion that it would be undesirable, and a positive danger to the public, for Parliament to pass any measure which might convey the idea that an optician, who is a person qualified to provide glasses prescribed by medical men, is further himself competent to examine the eyes of patients and to prescribe glasses for the correction of errors of refraction."

However, the approved societies have continued to allow their members to obtain glasses from opticians without producing a medical prescription, and it is a fact that a large proportion of the British public choose to go direct to an optician when they think they require glasses. The opticians, in order to facilitate co-operation with the approved societies, formed in 1923 the Joint Council of Qualified Opticians, which was made up of representatives of the three bodies mentioned above (the British Optical Association, the Worshipful Company, and the Institute of Ophthalmic Opticians). The Council drew up what they called a "register", and what is really a private panel, of men holding the qualifications of these Societies, and entered into arrangements with many of the approved societies to send clients to opticians on the "register." For the year 1936 the Council had 3,500 "registered optical practitioners"—i.e. opticians on the Council's "register"—while the number of approved societies (including branches) in 1935 which had entered into agreement with the Joint Council of Qualified Opticians was approximately 540. The optician on the Council's "register" displays a sign above his door with the letters J.C.Q.O. on it. Such shops are to be found in most parts of Great Britain, and the services of the optician can be obtained by any person, whether or not he is insured.

The Council was so successful that in 1927 it promoted a Bill to obtain State Registration for its members. A Departmental Committee was set up to consider this question, but was unable to come to a unanimous decision. A quotation from the Majority Report of the Committee is of interest, because it shows the opinions of responsible authorities who investigated the evidence. "It is generally agreed, however, that in the best interests of the patient the examination of his eyes should, if at all possible, be carried out by an oculist. So far as refraction is concerned the same resources are available to the oculist as to the optician, and in addition the oculist can bring to bear the whole of his medical experience, either in deciding that it is possible to exclude the existence of disease, or in diagnosing and treating any diseased condition, should this be present."

The immediate result of this report was to rouse the medical profession to action. For, although reporting against registration for opticians, the Majority Report stated that if ophthalmic treatment was not made available to the poorer classes within a comparatively short time, it might be necessary to reconsider the whole position. A National Ophthalmic Treatment Board was set up, consisting of members of the British Medical Association, and of the Association of Dispensing Opticians. The object of this Board was to provide a specialist service under which insured persons and others might have the advantage of an examination by an ophthalmic surgeon for a fee of 10s. 6d.

This Board has been a considerable success, in spite of the fact that its examination fee of 10s. 6d. is considerably higher than that of the Joint Council of Qualified Opticians which is 5s. The cost of appliances is identical on the tariffs of both bodies. The Board has about 370 local representatives in Great Britain, through whom the service is administered. Of these 370, 28 are in Central London, and many others are in the suburbs. Scotland seems poorly provided with only 14, as against 11 in Wales. The services of the Board can be had by all compulsorily-insured persons and their dependants, whether or not they are entitled to ophthalmic benefit from their society. Voluntary contributors who are entitled to ophthalmic benefit, and the general public with incomes below £250 a year, can also use the service.

Notwithstanding that an approved society has entered into an arrangement with some organised body such as the Joint Council of Qualified Opticians or the National Ophthalmic Treatment Board, the society is not allowed to prevent a member from obtaining ophthalmic services by other means.

In 1932 the Ophthalmic Benefit Joint Committee, composed of the representatives of the opticians' organisations and of the approved societies, was set up, at the instance of the Approved Societies Consultative Council, with a view to making proposals for the stabilisation of the administration of the benefit. This unofficial Committee issued three reports containing recommendations with regard to (*a*) the requisite qualifications of opticians for the purposes of the benefit; (*b*) standards of quality of materials and prices of lenses and frames; (*c*) a standard form of application for the benefit; and (*d*) the general supervision of the optician service. Regulations have now been made authorising the setting up of an Approved Committee to give effect to these recommendations.

The list of recognised opticians to be drawn up by the new Committee will provide societies with a means of knowing whether persons calling themselves opticians are, in fact, suitable persons to whom their members claiming the benefit can have resort for the purpose of obtaining glasses, and when the new arrangements are in force a member will only be allowed to obtain his glasses from one of these recognised opticians.

The Regulations also provide that the standard form of application for the benefit must tell the member of his right to go to a medical eye specialist, provided that he is prepared to pay out of his own pocket any excess cost in the event of his society only being able to pay the lower sum which would be involved in direct recourse to an optician.

The Provision of Ophthalmic Services

There is little organised provision for ophthalmic treatment apart from that made by approved societies for ophthalmic benefit, which amounted to the allocation in 1937 of about £613,000 by societies with a membership of about 11½ million in Great Britain—although, of course, not all their members were entitled to the benefit, and in many cases the benefit only amounts to a proportion of the cost of treatment or of spectacles. Some of the hospital contributory schemes enable their members to obtain ophthalmic benefit, which again only pays for a proportion of the cost of the service. In 1935, schemes with a membership of 2,120,000 persons, affiliated to the British Hospitals Contributory Schemes Association, made this provision for their subscribers and their dependants. Ophthalmic treatment can be obtained in voluntary and public hospitals. Public Assistance Committees also assist necessitous cases to purchase spectacles, and under the Public Health Act, 1936, local authorities may take action for the prevention of blindness, by providing spectacles and treatment.

Conclusion

Obviously, a large section of the community needs attention to its eyes. But it may be worse than useless to receive it from unqualified men who may make gross mistakes in treating or diagnosing them. Since ocular disturbances may be a symptom of any disease, there is a danger of serious injury to a person's eyesight if a symptom which is not due to an ocular disturbance is treated as such. The situation is not analogous to that existing in regard to dentistry, since dental defect is generally a phenomenon distinct from other defects. These facts are so well known to ordinary general practitioners that they refuse to treat ocular defects unless they have had a special training.

It has been stated by the Minister of Health that if the services of a medical eye specialist are available, any person suffering from eye trouble would be well advised to seek the services of such a specialist. Nevertheless, the public as a whole are not yet educated up to the standard of insisting on a specialist medical examination before obtaining glasses, even where the glasses so provided would cost them no more than under an optician service. It is very doubtful if there are at the moment, or will be at any time in the near future, sufficient numbers of doctors to undertake the work. Therefore, the public will still have to be allowed to have direct access to opticians, not only to have their spectacles made but to have their eyes tested.

THE PHARMACY SERVICES

Organisation of the Pharmaceutical Profession

Many doctors do not dispense medicines, but instead issue prescriptions, which are dispensed by pharmacists—particularly under the National Health Insurance Scheme, under which dispensing is undertaken by doctors only when there is no convenient service of chemists available. But sometimes, at any rate, the pharmacist prescribes as well as dispenses. He is easily accessible and probably charges only for the medicines supplied and not for his advice.

The pharmacists first created the Pharmaceutical Society in 1841, because attempts were made by the apothecaries to prevent them from dispensing. Thus the Pharmaceutical Society was founded originally to protect the professional interests of the pharmacists. But by the Acts of 1852 and 1868 its organisation was used by the State to secure to the public definite standards of service. Only persons on the register of the Pharmaceutical Society may call themselves "Pharmaceutical Chemists" or "Chemists and Druggists." The former title requires the higher academic qualification.

In 1842 the Society founded a School of Pharmacy, which is now the College of Pharmacy in the University of London. Degrees in pharmacy can also be obtained at Manchester and Glasgow. The Society is, however, the statutory examining body and determines the qualifications for admission to the Register. The Register includes the names of about 22,000 persons who practise in Great Britain, the Dominions, the Colonies and foreign countries. As a result of the Act of 1868, which has since been revised, registered pharmacists were given special privileges in connection with the sale of poisons, and under the National Health Insurance Scheme all medicines must be dispensed by or under the direct supervision of a registered pharmacist (subject to an exception in favour of persons who had acquired special experience as dispensers to doctors at public institutions prior to December 1911).

The Statutory Committee of the Society, set up by the Pharmacy and Poisons Act 1933, has power to remove a member from the Register for a criminal offence or for conduct which "renders him unfit to be on the Register"; similarly it has power to restore a name to the Register. The Chairman of the Committee must be a person having practical legal experience and he is appointed by the Privy Council. The remaining 5 members of the Committee are appointed by the Council of the Society, which consists of 21 persons elected by the members of the Society and 3 appointed by the Privy Council. Appeal against the Committee's intention to erase a name from the Register may be made to the High Court or the Court of Session.

The Society in England and Wales has the duty of enforcing the law relating to pharmacy and poisons. The Society pays the cost of prosecutions out of its own funds, and it also employs inspectors to watch for breaches of the law. Thus, it has to prosecute unqualified men who encroach on the sphere of qualified men, and also its own members who fail to keep the regulations regarding the conditions under which poison must be sold. In Scotland the duty of enforcing the law does not rest with the Society. The Society merely reports breaches to the Crown Office for action by the Procurator Fiscal.

Until 1933 the Pharmaceutical Society had the responsible task of amending the Poisons List. However, various other bodies had an interest in this matter and it was felt that a more representative body should take over the responsibility. So a Poisons Board was formed consisting of members of the Society, representatives of the Home Office, the Scottish Office, the Ministries of Health and Agriculture, the Royal Colleges of Physicians of London and of Edinburgh, the General Medical Council, the Institute of Chemistry, and the B.M.A. The Poisons Board submits a list to the Secretary of State, who may amend the list after consultation with the Board. Poisons included in Part I of the Poisons List are those which may be sold exclusively by registered pharmacists. For the protection of the public detailed instructions are laid down as to methods of selling poisons, methods of labelling and stopping bottles, and so forth.

Authorised sellers of poisons are persons, companies, firms or representatives entitled to carry on the business of a chemist and druggist. Every authorised seller of poisons must register his business premises with the Pharmaceutical Society. The Society resisted the attempt of companies to secure the same privileges as individual qualified proprietors until they were certain that the public would be sufficiently protected. Since 1908, companies have been confirmed in their right to be registered sellers of poisons, but for public protection certain restrictions have been made. The business must be under the management of a registered pharmacist, as regards dispensing and retailing of poisons, and in all premises where sale of drugs is allowed there must be a qualified manager.

As a result of a legal decision in 1920 it was laid down that the Pharmaceutical Society could not properly watch over certain specific trading interests of the profession or act as an employers' organisation, regulate wages or fix hours. These functions are admirably performed by the National Pharmaceutical Union and the Scottish Pharmaceutical Federation. These bodies perform the business of debt collecting and the keeping of an employment register.

In England and Wales the Union negotiates with the Ministry of Health concerning the chemists' terms of service under the National Health Insurance Scheme. In Scotland the Pharmaceutical Standing Committee, the executive body of the General Council of Panel Chemists (Scotland), negotiates with the Department of Health.

Provision for Pharmaceutical Services

The chemist has an important part to play in the organisation of the National Health Insurance services. The insurance committees of county and county boroughs enter into contracts with all chemists wishing to supply drugs to insured persons. The committee publishes a list of such chemists and the insured person may go to any chemist on the list. These chemists, who are often referred to as being "on the panel," must agree to abide by the "terms of service" laid down by the Minister of Health in England and Wales—in Scotland by the Department of Health for Scotland. The chemists' essential obligation is that of supplying drugs on insurance practitioners' prescriptions. The drugs are supplied without charge to the insured person.

All National Health Insurance prescriptions must be presented to the insurance committees for pricing according to a standard tariff. The committees in England and Wales are grouped for this purpose into 15 different areas, with a pricing bureau for each. In Scotland there is a central bureau for the whole country. The chemists are paid from funds set aside from the monies made available by statute for the payment of medical benefit (i.e. medical treatment and attendance, including the provision of necessary medicines and "prescribed" appliances).

The proportional distribution of the fund among the committees is undertaken by the Ministry of Health in England and Wales (through the Welsh Board of Health in Wales), and by the Department of Health for Scotland in Scotland, on the advice of advisory committees, which include representatives of the chemists, and from the amount so received the insurance committees pay the accounts of the chemists on their lists. The wholesale cost of all drugs and appliances supplied is paid in full from the fund, the balance of the fund being used for the payment of dispensing fees (in accordance with an appropriate scale) but subject to a small discount if the amount of the balance available in the fund is not sufficient for payment in full.

In 1936 £2,177,758 in England and Wales, and £176,996 in Scotland, was spent by the scheme in the purchase of drugs and appliances from insurance chemists. In addition very large sums were spent by the public individually at chemists. Some of the dangers which the public may incur if they purchase drugs and medicines without discrimination have already been discussed in Chapter II.

OTHER MEDICAL AUXILIARIES

There are several trades and professions which are in a less established position both as regards the public and the medical profession than the dentists, and even the opticians, but which nevertheless give curative treatments. Some of them, such as the Biophysical Assistants, never render any service to the public except under the supervision of a medical practitioner. Others, such as some masseurs and masseuses and the chiropodists, practice without any such restrictions. They are uncontrolled by any legislation except in the areas of some local authorities, notably the L.C.C., which have obtained the power to licence only persons whom they regard as fit and proper to carry on their particular calling. However, some of them have formed professional organisations, and these are pressing for State registration. Despite the fact that State registration of medical assistants may be unnecessary, it is obviously desirable that they should have a high standard of professional qualifications, ethics and conduct.

The Incorporated Society of Masseuses was founded in 1894 "to raise the standard of massage and to improve the professional position of women taking up that work." In 1905 membership was extended to men, and the certificates granted by the society were regarded as being of such a high standard that medical men seldom employed outsiders. In 1920 a Royal Charter incorporated the society as the Chartered Society of Massage and Medical Gymnastics. The Council of the Society approves schools of training and holds periodical examinations. Members of the society are forbidden to undertake a case except under the direction of a medical practitioner, to sell goods to patients, to accept commissions or to advertise except in certain prescribed fashions such as in a professional journal.

The organisation of persons engaged in electrical and X-ray treatment is of much more recent origin, for until a few years ago it appeared to be quite easy for such treatment to be given by inadequately trained persons. In 1928, the problem was considered by the British Medical Association, who advocated that in view of the risk to the public involved in the use of electricity and radiation by untrained persons, suitable courses of training should be organised under medical direction for those who wish to administer this form of treatment. As a result of this, an arrangement was made with the Society of Apothecaries to compile a list of approved persons, who, under the conditions laid down by an expert committee of the B.M.A., were qualified to dispense certain treatments, i.e. ultra-violet radiation, light, heat, etc. The first list of names of those who were thus qualified appeared in 1930. It included only the names of those who had agreed not to treat patients except under the direction and responsibility of a registered medical practitioner. They assumed the name of Biophysical Assistants.

It was soon realised that the register was fulfilling a most useful function and that it could with advantage be extended to persons engaged in other services ancillary to the medical profession. Accordingly, the B.M.A., in conjunction with the society of Apothecaries, the Chartered Society of Massage and Medical Gymnastics and the Society of Radiographers (who also conduct examinations in radiography), formed the Board of Registration of Medical Auxiliaries in 1936. The primary object of the Board is to establish a national register of "medical auxiliaries" whose qualifications meet with its approval, and to inform the medical profession and local government bodies of the existence of such a register. No person on the register exercises his or her functions except under the direction of a registered medical practitioner. The Council of the Board consists of representatives of the B.M.A., the Society of Apothecaries, the Chartered Society of Massage and Medical Gymnastics and the Society of Radiographers.

The Board's first "National Register of Medical Auxiliaries," published in 1937, includes the names of members of the Chartered Society of Massage and Medical Gymnastics, the Society of Radiographers, the Association of Dispensing Opticians, and Biophysical Assistants (i.e. holders of the Diploma of the Society of Apothecaries). The inclusion of the members of bodies engaged in other spheres of medical auxiliary work, such as the chiropodists and some laboratory assistants, is also possible, provided their curriculum and ethical standards satisfy the Board. It is hoped that the advantages of being included in the Board's Register will encourage outside bodies, such as the various chiropodists' associations, to raise the standard of their qualifying examinations and the quality of their professional organisation. Their status and relationship with the medical profession should be clarified, particularly since they are claiming to do minor operations.

The question of the osteopath's position is also relevant here. Some osteopaths do excellent work, but they are nearly all reluctant to consider themselves in any way subordinate to the medical profession. Consequently, they very often assume a responsibility which, owing to their lack of medical training, is quite unjustifiable and may lead to disaster. If they agreed only to treat a case where the responsibility is taken by a registered medical practitioner, their status in the eyes of the medical profession would be much improved.

The history of the medical auxiliaries now on the National Register shows that the medical profession has nearly always assisted them in their organisation, regarding them not as its competitors as was the case with the opticians, but essentially as assistants. The setting up of the Board of Registration of Medical Auxiliaries is expected to have the effect of raising the standard in all spheres of work associated with medical science.

State registration of medical auxiliaries is perhaps unnecessary if their professional organisations impose rules which prevent them dealing directly with the public. Thus it may be said that the existing State register for nurses is unnecessary, whereas that for dentists is obviously necessary. The B.M.A. generally oppose the State registration of persons whose services they consider the public should only receive under the supervision of a medical practitioner unless, as is the case with those persons on the National Register of Medical Auxiliaries, they have agreed not to practise except under the supervision of a medical practitioner. This policy has been adopted because the B.M.A. hold that the public would imagine that State registration implied State recognition of their right to serve the public directly.

VII. NATIONAL HEALTH INSURANCE

The National Health Insurance System: Introduction—Persons Covered by National Health Insurance—Excepted Persons—Exemption—Voluntary Insurance—Determination of Doubtful Questions of Insurability—Insurance Rights—Statistics of National Health Insurance—Finance of National Health Insurance—Administration—Medical Benefit—Approved Societies—Deposit Contributors and Others; Cash Benefits—Maternity Benefit—Additional Treatment Benefits—**A Criticism of the National Health Insurance System:** Administration—Approved Societies—Cash Benefits—Maternity Benefits—Additional Treatment Benefits—Treatment of Claims—The Extent of National Health Insurance—**The Extension of National Health Insurance:** The Case Against National Health Insurance—Schemes for a Public Medical Service—Scope of an Extended Health Insurance Scheme—Measures for Extending and Improving Medical Benefit—Cost of Providing Consultant and Specialist Services—Extension of Additional Treatment Benefits—Cost of Improved Maternity Benefit—Administrative Problems—Capacity to Pay—Justification for the State Contributions—Conclusion.

THE NATIONAL HEALTH INSURANCE SYSTEM

Introduction

It is proposed here to give an account from an administrative point of view of the National Health Insurance system, and to discuss the problems connected with it. Consequently, this chapter has been placed after the account of the medical, ophthalmic, dental and other services which are so very closely linked to the insurance system. In describing these services mention has been made of the National Health Insurance system, and some parts of it have been described in detail. These accounts will now be brought together for further descriptive analysis and discussion.

During the late nineteenth century and early twentieth century there grew up a number of "clubs," medical aid societies, friendly societies and trade unions, which provided various forms of "contract" medical services to their members. The British Medical Association engaged in a long struggle with them in order to secure adequate remuneration for the doctors engaged in this kind of work, as we have mentioned in Chapter V. At the same time proposals were being put forward, partly as a result of the recommendations of the Minority Report of the Royal Commission on the Poor Law in 1909, that a comprehensive public medical service should be created through the agency of the local health authorities. For a time it looked as if the Government might be persuaded to act along these lines. Social insurance was little heard of. Suddenly, however, in 1911, the Liberal Government, under the inspiration of Mr. Lloyd George, decided to set up a national scheme of contributory health insurance.

All manual workers between the ages of 16-70 and non-manual workers with incomes of less than £160 a year were brought into the scheme. Further, provision was made for those with incomes of less than £160 per annum who worked on their own account, to join the scheme as voluntary contributors. Similarly, those who passed out of it by ceasing to be insurably employed were permitted to remain as voluntary contributors.

The rates of contribution in 1911 were fixed at 3d. a week from the employer, 4d. from the male worker, and 3d. from the female worker. The voluntary contributors paid both the employee's and the employer's share. The State undertook to pay two-ninths of the cost of benefits and of the administration of the scheme.

The scheme was initiated by the State and the State retained general control over it the central organs being the National Health Insurance Commissions in England and Wales, Scotland and Ireland. But the detailed administration was far from being centralised. Supervision has since been taken over by the central departments concerned with health.

The friendly societies, the trade unions, and some of the medical aid societies had become so strongly entrenched in this kind of insurance that it was considered neither possible nor desirable to ignore them. Their membership included one-third of the persons who were eventually brought into the National Health Insurance system. Consequently, when the Act of 1911 was passed these organisations were brought in as insurance carriers. The Act was also framed in such a way as to enable the industrial assurance companies to form non-profit-making sections, whose finances and administration had to be kept distinct from the companies' other work, for the purpose of carrying on National Health Insurance. These have since played a very important part in the scheme, and, although the companies have not been allowed to profit directly, they have gained great indirect profits by obtaining the entry to so many homes for their agents, who are thus enabled to secure a lucrative business of life assurance by weekly payments.

The bodies thus authorised to act as insurance carriers became known as "approved societies," and insured persons were encouraged to join them. Provision, however, was made for those who did not. To the approved societies was left the administration of all the benefits provided under the Act, except "medical benefit." The Act also provided that the approved societies should not be conducted for profit, and that their constitution should provide for their affairs being subject to the absolute control of their members.

The benefits obtainable under the Act were not dissimilar from those provided by the trade unions and friendly societies, including a cash payment during sickness or disablement, a maternity cash benefit, and provision for the services of a general practitioner and drugs and appliances. They also included, until 1920, sanatorium treatment for tuberculosis. Apart from these statutory benefits the approved societies could give other benefits, known as additional benefits, according to their financial position and with the sanction of the central departments.

The original provision for persons to enter insurance as voluntary contributors if they earned less than £160 per annum was removed in 1918 owing to the poor response to the offer and its administrative expense, but the other voluntary contributions provisions were continued and were extended in 1925, the present position being described under the heading 'Voluntary Insurance.'

Since the war the National Health Insurance legislation has been frequently revised, alterations made in the number of persons who are covered by it, and the rates of benefit modified. A consolidating Act was passed in 1936. When the Widows', Orphans' and Old Age Contributory Pensions Act was passed in 1925, the pension system was interlocked with National Health Insurance.

Persons covered by National Health Insurance

Broadly speaking, the classes to be insured comprise all persons over 16 years of age (whether male or female, British subjects or aliens) who are employed in the United Kingdom, or on British ships, under a contract of service (or under a contract of apprenticeship with a money payment), except those engaged in a non-manual capacity at a rate of remuneration exceeding £250 a year. This covers almost all persons who work under the direction of an employer, irrespective of industry or occupation, except the more highly-paid non-manual workers, but it does not cover such classes as independent contractors, ministers of religion and professional men in general.

Small independent contractors or sub-contractors, however, who themselves engage in manual labour for the purposes of another person's trade or business, were made insurable, together with share-fishermen, by the amending Act of 1928. Other small classes who are insurable under special provisions are out-workers working at home or in their own workshops on articles or materials given out to them for the purpose of an employer's business, and cab-drivers plying for hire with vehicles hired from the owner.

Excepted Persons

There are various exceptions applying to persons who would otherwise be liable to compulsory insurance. The most important exceptions refer to persons employed under the Crown or a local or public authority, or as a clerk or salaried official of a railway or other statutory company, where the Minister certifies that the terms of the employment secure benefits in sickness and disablement of at least equal value to the corresponding health insurance benefits; school teachers in "contributory service"; commission agents who are either mainly dependent on their earnings from some other occupation, or employed as agent by more than one employer and not mainly dependent on the earnings from any one agency; those employed without money payment by a parent or by an employer who fully maintains the employee; persons casually employed otherwise than for the purposes of the employer's trade or business; and persons engaged in a number of miscellaneous employments specified in a special Order as being ordinarily of a subsidiary character and not a principal means of livelihood. The last-mentioned exception covers various part-time employments such as organists and vergers at churches, attendants at theatres, secretaries of societies or clubs, lamplighters, and auxiliary postmen.

Exemption

Personal exemption from paying contributions may be obtained by those who show that they have a pension or other unearned income of at least £26 a year, or that they are mainly dependent for their livelihood on some other person or on a non-insurable occupation. This exemption, however, does not relieve the employer from paying his share of the contributions.

Voluntary Insurance

Voluntary insurance is now only open to a very restricted class. The underlying principle is that it is, in effect, a means of enabling persons who cease to be compulsorily insured to continue in insurance if they so desire, and of enabling those who are compulsorily insured only for pensions to become insured under the combined health and pensions scheme. Thus, it is confined, broadly speaking, to persons who cease insurable employment (e.g. persons entering a non-insurable occupation or non-manual workers receiving an increase of earnings above £250 a year) after being employed for 104 weeks or more, provided that they give written notice within a certain period (twenty-one months on the average) from the date of their last insurable employment, that they wish to become voluntary contributors.

A similar option is given to those who cease to be engaged in excepted employment under the Crown, local authorities, railway companies, etc. (which is insurable for pensions but not for health insurance), and also to those who are still in such excepted employment, provided in the latter case that they give written notice within twelve months after entering such employment.

Married women are expressly debarred from voluntary insurance.

Determination of Doubtful Questions of Insurability

The Minister of Health and the Secretary of State for Scotland are charged with the judicial function of determining, subject to an appeal to the courts on a question of law, whether a particular employment comes within the scope of insurance.

Resort to this formal procedure was fairly common at the inception of the scheme, when new questions naturally presented themselves in greater numbers than subsequently. By 1919 the decisions given in a year had fallen to a negligible number, but from 1920 onwards there has been a steady increase, owing to the indirect effect of the unemployment insurance scheme and, later, to that of the contributory pensions scheme. The scope of the health and unemployment insurance schemes is identical in many respects, and the contributory pensions scheme is even more closely interlocked with that of health insurance. This has caused employers and employees (or their dependants) to raise questions as to their responsibilities and rights to a greater extent than when only one set of contributions and benefits was at stake.

Insurance Rights

A person who relinquishes insurable employment remains an insured person until June 30 or December 31, whichever comes next before the end of a period of two years reckoned from the end of insurable employment. Voluntary contributors remain insured for a similar period on ceasing to pay contributions. The period of free insurance is thus on the average about twenty-one months. An insured woman who marries has to notify her approved society within eight weeks of her marriage. If immediately before or during the first year after her marriage there is a consecutive period of eight weeks during which she has had no insurable employment, she is deemed to have given up work. She then becomes entitled for twelve months to sickness benefit,* one maternity benefit within two years of her marriage and any additional payments her approved society may make in respect of these benefits. She also retains her title to medical benefit until June 30 or December 31, whichever comes first after her title to sickness benefit ceases, and to any treatment benefits provided by the society until two years after her marriage.

From 1921 onwards emergency legislation was continually being passed to enable unemployed persons to remain members of the scheme for purposes of medical and some other benefits after they had exhausted their normal rights. Under the National Health Insurance and Contributory Pensions Act, 1935, a genuinely unemployed person who has been insured for the ten previous years may retain a title to medical and maternity benefit, and to any additional treatment benefit provided by his approved society after the termination of the free insurance period. This title lasts for twelve months, called the "extended insurance period," and thereafter his insurance will be continued from year to year so long as he remain genuinely unemployed. He can regain his title to sickness and disablement benefits by 26 weeks of employment and the payment of 26 contributions within a period of two years.

---

* For not more than six weeks in all.

Persons over 65 who have been members of the scheme retain their title to medical benefit, maternity benefit for their wives and additional treatment benefit.

The Government in June 1937 introduced a Bill entitled National Health Insurance (Juvenile Contributors and Young Persons) Bill to enable boys and girls, aged 14-16, to be eligible for "medical benefit" directly they leave school and enter insurable employment. It is intended that if the Bill secures the Royal Assent in time the measures proposed in it should come into force on January 1, 1938.

Statistics of National Health Insurance

The following table sets out the number of persons covered for National Health Insurance on December 31, 1936:

December 31, 1936	England	Wales	Scotland	Great Britain
Approved Societies:				
Compulsory . . .	13,694,000	841,600	1,695,600	16,231,200
Voluntary	560,200	24,400	55,700	640,300
H.M. Forces . . .	176,000	12,000	18,000	206,000
Deposit Contributors:				
Compulsory . . .	242,100	8,850	14,400	265,350
Voluntary	5,000	200	200	5,400
Navy, Army and Air Force Fund:				
Serving Forces . . .	(110,500)	(Fund administered centrally for Great Britain)		110,500
Discharged Men:				
Compulsory . . .	(13,300)			13,300
Voluntary . . .	(900)			900
Exempt Persons . . .	13,000	300	3,400	16,700
Total for whom full or partial contributions are paid . .	14,815,000	887,350	1,787,300	17,489,650
Others entitled to certain benefits:				
Women who have ceased employment on marriage but remain insured for two years	290,000	19,800	46,000	355,800
Insured Persons over 65 .	1,110,000	71,950	143,000	1,324,950
TOTAL INSURED . . .	16,215,000	979,100	1,976,300	19,170,400

Under the National Health Insurance (Juvenile Contributors and Young Persons) Bill about three-quarters of a million children will be brought into the scheme.

Finance of National Health Insurance

Contributions are normally collected by affixing a stamp to an insurance card once a week, but large employers may make arrangements for periodic stamping in bulk. The value of the stamp is 1s. 8d. for men and 1s. 2d. for women, and covers the employer's and the employee's contribution to both the health insurance and the contributory pensions scheme. The employer is required in all cases to pay the whole contribution in the first instance and is responsible for the stamping of the card. He can, of course, recover the employee's share of the contribution. The composition of the contribution and manner in which it is allocated to different schemes are set out below:

	Health		Pensions	
	Men	Women	Men	Women
Employer . .	4½d.	4½d.	5½d.	2½d.
Employee . .	4½d.	4d.	5½d.	3d.
	9d.	8½d.	11d.	5½d.

The State makes a grant in the case of health insurance of one-seventh of the cost of benefits, including additional benefits, paid to men and one-fifth of those paid to women, including the cost of maternity benefits and additional benefits. These proportions include the cost of administration borne by the approved societies and the insurance committees. The State also bears the whole cost of the central administrations.* The 1937 National Health Insurance (Juvenile Contributors and Young Persons) Bill provides for contributions of employer and employee of 2d. each per week, and the State will contribute towards the cost of medical benefit and the cost of administration in the same proportion as it does under the principal Act.

Administration

The administration of the National Health Insurance scheme is carried out by the Ministry of Health, the Department of Health for Scotland and the Welsh Board of Health. The National Health Insurance Joint Committee co-ordinates the work of these departments and that of the Ministry of Labour for Northern Ireland, which is responsible in that country for National Health Insurance. The departments exercise a general supervision over the whole scheme and employ a body of local inspectors to assist them. The machinery, for example, which has been evolved for controlling the medical side of the scheme has been described in Chapter V. The Government Actuary is responsible for the periodical valuation of the funds of approved societies. The expenditure, by both approved societies and insurance committees, of National Health

---

* The State's share of the cost of the scheme is thus brought to approximately one-sixth, and the general taxpayer therefore comes off far more lightly than under pensions or unemployment insurance. Out of a total income of £41.7 millions in Great Britain in 1936 £28.2 millions came from contributions of employers and employees, £6.3 millions from investments, etc., and £7.2 millions from the State. £32.6 millions was spent on benefits and £5.7 millions on administration.

Insurance funds is subject to audit by auditors appointed by the Treasury. By means of the Auditors' and Inspectors' Reports, correspondence from insured persons, and a systematic scrutiny of the applications from societies for the issue of funds, the central departments possess an intimate knowledge of the administration of each society. Where suggestions of lax administration are forthcoming, the department concerned communicates with the society by correspondence, or arranges a visit from an officer of the department, with a view to any necessary reforms being carried out.

The local administration of medical benefit and drugs is in the hands of insurance committee of which there is one in every county and county borough and large burgh. In England and Wales one-fifth of the members of the committee are appointed by the county council or county borough councils, and three-fifths as representatives of insured persons. The remaining one-fifth consists of one medical practitioner, appointed by the council, two members by the local medical committee, and the remainder by the Minister. In Scotland the membership is very similar. Insurance committees have the assistance of the Panel Committee and the Pharmaceutical Committee, which are independent statutory bodies representing respectively the insurance practitioners and the insurance chemists in the area; of the Local Medical Committee, which represents the medical practitioners (whether insurance or not); and of other bodies which are sub-committees of the Insurance Committee itself, such as the Finance Sub-Committee, the Medical Services Sub-Committee, the Pharmaceutical Services Sub-Committee, a Joint Services Sub-Committee, and an Allocation Sub-Committee. The work of insurance committees includes arranging schemes for the administration of medical benefit, and for the provision of medicines and appliances, and for inquiring into complaints. The committees also have duties in connection with the administration of cash benefits to "deposit" contributors and members of the Army, Navy and Air Force Insurance Fund. They have power to make inquiries into excessive sickness and to fix the liability for this on a particular employer or local authority. This valuable power has, however, never been exercised effectively. Further, the committees are empowered to carry on health propaganda work. The rest of the local administration of National Health Insurance is carried out by the approved societies, either as units or in the case of some societies by their "branches."

Medical Benefit

The administration of medical benefit is under the control of the insurance committees. The nature of medical benefit has already been described in Chapter V. Broadly speaking, it includes general practitioners' services and the provision of such drugs and medical or surgical appliances as are necessary. Voluntary contributors whose total income exceeds £250 a year are debarred from this benefit. We have also set out in Chapter V the average number of persons on a doctor's panel, and the manner in which an insured person may freely choose his or her panel doctor. The total cost of medical benefit in Great Britain was £10,851,000 in 1936.

Insurance committees have power to require certain classes of persons (e.g. exempt persons whose total income from all sources exceeds £250 a year), and in exceptional cases to allow other persons, instead of receiving medical benefit under the normal arrangements, to make their own arrangements for receiving medical treatment and attendance, and in such cases committees will, out of the funds available for defraying the cost of medical benefit, contribute towards the cost of the medical treatment and attendance of such persons sums not exceeding in the aggregate the amounts which the committees would otherwise have expended in providing medical benefit for those persons.

In 1936 in England and Wales there were over 150,000 persons on the lists of approved institutions for medical benefit. In Chapter V we have described the nature of these institutions.

Approved Societies

Many of the approved societies that were granted approval in the early history of the National Health Insurance scheme have disappeared. The 2,208 in England were reduced to 1,192 by 1924 partly because, as the Royal Commission on National Health Insurance reported in 1926, they failed to conform "to the standard of precision and promptitude entailed by the requirements of an Act of Parliament." Others found the accounting procedure irksome and gave up National Health Insurance work. Others were amalgamated with larger societies. In 1935 there remained in Great Britain 859 approved societies. Of these 26 were societies with "branches," the total number of branches for the purpose of National Health Insurance being 5,506. Therefore the actual number of units administering the system is 6,339. The membership of these approved societies ranges from 34 to 2,600,000.

The following table shows the Approved Societies at the Fourth Valuation (1932-34) grouped according to size.

No. of Members	Without Branches					With Branches	Total
	United Kingdom	English	Scottish	Welsh	North Ireland		
Less than 100	—	34	—	—	—	—	34
100-999	10	381	28	13	7	1	440
1,000-9,999	53	189	36	22	8	8	316
10,000-99,999	55	27	7	—	3	10	102
100,000-999,999	13	—	—	—	—	7	20
1,000,000 and over	3	—	—	—	—	—	3
Total	134	631	71	35	18	26	915

The three societies with over a million members are the Prudential Approved Society for men (2 million), the Prudential Approved Society for women ($1\frac{1}{4}$ million), and the National Amalgamated ($2\frac{1}{2}$ million). These three between them account for over one-third of the total membership.

Continued pressure has been brought to bear on the smaller societies to amalgamate, and the effectiveness of this may be illustrated by the fact that in 1933 there were 34 societies with less than 100 members against 70 in 1924.

Approved societies are not organised on a territorial basis. A few impose an employment, religious or temperance test on their members. The majority are open to all comers, and according to the law their members must have the right of complete control over them. Before a society may undertake National Health Insurance business it must be approved by the Minister and for this purpose must make rules to the Minister's satisfaction. Moreover, approval can be withdrawn if there is evidence of maladministration. Further, disciplinary action can be taken against the officers of approved societies. All their expenditure of National Health Insurance funds, as has been shown, has to be audited by auditors appointed by the Treasury, and the Government Actuary values the assets of approved societies every five years. As a result of these valuations, some societies are found to have surplus funds. These funds are utilised to provide additional benefits for the members of the particular society which is fortunate enough to have them.

All cash benefits and additional treatment benefits are administered by the societies. But in the case of medical benefit their control is limited to the right to elect members to the insurance committees as representatives of the insured population. They merely notify each local Insurance Committee of the names of their members who are resident in the committee's area, and the committee is solely responsible for the administration of medical benefit.

Approved societies need not accept a medical certificate of incapacity to work, but the Committee of Management may make inquiries into all the evidence which is available before they consent to pay sickness or disablement benefit. Often the societies make use of the Regional Medical Staff for purposes of obtaining decisions on doubtful points. The societies employ sick visitors to supply them with all the relevant information about a member's health, and to ensure that their rules relating to behaviour during sickness are observed. These rules, which are in a form prescribed by regulations, impose certain obligations and restrictions upon members claiming benefits. They require the member to abstain from remunerative work, or from conduct likely to retard his recovery, and to follow the doctor's instructions. They also make it necessary for the member to obtain his society's consent before leaving the locality in which he resides, and prohibit absence from home after certain specified hours.

Every insured person has a right of appeal against the society's decision on his claim. The appeal procedure consists at the first stage of reference to an arbitrator or other tribunal, such as a committee of members, appointed under the rules of the society, and in the last resort of appeal to the Minister, by whom a referee selected from the Panel of Referees (either barristers or solicitors) specially constituted for this purpose, is appointed to hear and decide the case. The decision of the Minister's referee is final.

Deposit Contributors and Others

Persons who have not become members of an approved society are known as deposit contributors. They may have failed to join a society or may be only temporarily employed, and thus regard it as unnecessary to join one. Again, they may be unable to obtain admission to a society due to chronic ill-health. Therefore, the State, in collaboration with the Insurance Committees, administers a special scheme for them, but they receive no additional benefits. In 1936 there were 271,000 in Great Britain. Similarly, the Army, Navy, and Air Force Insurance Fund is administered by the central department. It included, in 1936, 110,500 serving soldiers, sailors and airmen who are not members of an approved society and are entitled only to maternity benefit for their wives, and 14,200 discharged men who for reasons of ill-health are not members of an approved society. There were also 16,700 exempt persons who were not members of an approved society.

Cash Benefits

Not only was National Health Insurance planned to provide medical services but its object was also to give sick persons financial assistance during their incapacity in the same way that the trade unions and friendly societies had given it.

These cash benefits are the most expensive part of the scheme, and cost nearly twice as much as medical benefit. They are, therefore, much more rigidly controlled by an insured persons' contributory record and, unlike medical benefit, sickness benefit does not begin on the first day of insurance. The standard rates are 15s. a week for men, 12s. a week for single women, and 10s. a week for married women. The benefit normally commences on the fourth day of incapacity and may continue for a maximum period of 26 weeks. In order to qualify for receipt of sickness benefit a person must have been insured for at least 26 weeks and have paid 26 contributions, but until 104 weeks of insurance have been completed and 104 contributions have been paid benefit is payable at a lower rate of 9s. for men and 7s. 6d. for women. These benefits may be reduced on account of arrears, and they cease to be payable at the age of 65. Disablement benefit is a continuation of periodical payments at the rate of 7s. 6d. weekly for both men and women in respect of incapacity after the period of 26 weeks' sickness benefit has been exhausted. It is payable as long as incapacity continues, but, like sickness benefit, it is subject to reduction for arrears and ceases at the age of 65. The qualifying conditions for receipt of this benefit are 104 weeks of insurance and the payment of 104 weekly contributions. The total cost of sickness and disablement benefit in Great Britain was £17,235,000 in 1936.

Where compensation under the Workmen's Compensation Acts, the Employers' Liability Act or damages at common law are recovered or recoverable in respect of any injury or disease, sickness or disablement benefit is only payable if and so far as the weekly value of the compensation or damages is less than the amount of the benefit. If, owing to the bankruptcy of the employer or for any other cause, the insured person is unable to obtain compensation then he is entitled to benefit. An approved society may take proceedings in a member's name to recover compensation if a member refuses or neglects to enforce his claim.

Sickness, disablement or maternity benefit may not be paid to any person while he or she is an inmate of any workhouse, hospital, convalescent home or infirmary, supported by any public authority, or out of public funds, or by a charity, or by voluntary subscriptions. During such periods the amount of the benefit must be paid in whole or in part to the person's dependants, if any, or applied for their advantage. In so far as the benefit is not disposed of in this way it may be applied at the discretion of the society, and with the authorisation of the insured person, towards defraying any expenses for which he may be or become liable, otherwise than to the institution, or be paid in whole or in part to the institution, unless the institution is a workhouse, poor law infirmary, mental hospital or other similar institution maintained out of public funds. Any balance of benefit up to a maximum of £50 which has not been paid or applied in any of the ways above mentioned is payable in cash to the insured person when he leaves the institution, normally in weekly instalments varying from 10s. to £2. If he dies in the institution the sums form part of his estate.

The following table sets out the cash benefits and the additional treatment benefits provided by two large societies and one small, as set out in a publication of the Charity

Organisation Society entitled 'Additional Benefits Payable by Certain Approved Societies —Fourth Valuation.'

	Hearts of Oak	Royal Liver	Warehousemen and Clerks Association
Members at 4th Valuation:			
Men	387,987	296,987	9,317
Women	141,875	188,685	—
Cash Benefit increased to:			
Sickness:			
Men	18s.	16s.	24s.
Women—			
Single and Widowed	13s.	—	—
Married	11s.	—	—
Disablement:			
Men	9s.	8s.	12s.
Women—			
Single and Widowed	6s. 6d.	—	—
Married	5s. 6d.	—	—
Maternity			
Men	46s.	50s.	80s.
Women	42s.	—	—
Treatment:			
Dental	Half Cost	Half Cost (men only)	Full Cost
Ophthalmic Treatment and Operation Fees	Full Cost up to £3 3s. (men only)	Full Cost up to £5 5s. (men only)	21s.
Appliances	Society's Scale (men only)	Society's Scale (men only)	Full Cost up to 25s. (35s. outside London)
Medical and Surgical Appliances	Up to £1, Full Cost Above £1, Half Cost Max. £2 10s.	Not less than half cost up to £5, part excess at discretion (men only)	Full Cost
Convalescent Homes:			
Maintenance	Full Cost	—	Full Cost
Fares	Up to 15s.	—	Full Cost
Hospitals	—	—	10s. per day
Nursing	Whole or Part (men only)	Full Cost up to £1, part excess at discretion (men only)	—
Infection, payment during enforced absence from work	At Discretion (men only)	—	—
Want or Distress	At Discretion	At Discretion (men only)	At Discretion
Payments to Approved Charitable Institutions	—	—	At Discretion

The Friendly Societies also provide facilities for their members to insure voluntarily for sickness pay. Thus in the Hearts of Oak Society over 80 per cent of members have insured for this purpose. The voluntary membership of Friendly Societies is 8,201,000, and it is probable that a large proportion of these insure for sickness pay. The rates of contribution and pay vary with the age of the person making this insurance, and also with the nature of their employment. Thus, in the Hearts of Oak Society, contributions range in non-hazardous occupations between £1 5s. a year for members under 17 years of age at the date of their admission to the Society, and £2 7s. a year for members over 44 years of age. The rates of benefit are as follows:

£1 per week for 26 weeks; 10s. per week for 26 weeks; 5s. per week for remainder of illness.

Societies covering 8½ million members (about half the total membership of approved societies) make additions to sickness and disablement benefit. The societies which have a low rate of sickness such as those which include, for example, mainly agricultural workers, can pay higher benefits than societies with a large membership scattered all over the country in varying occupations. The total amount allocated at the fourth valuation for the provision of additional cash benefits in Great Britain was £8,000,000, which was just under half the total available for all types of additional benefit. Most societies give from 1 to 5 units. The average is about 3½ units. A unit is 1s. a week for persons receiving sickness benefit, 6d. a week for disablement benefit, and 2s. for maternity benefit.

Insured persons are not eligible for the additional cash benefits provided by their society until they have been members of the society for four years. Additional cash benefits may also include the payment of sickness benefit from the first instead of from the fourth day of sickness. The societies may use their surpluses not only to pay additional cash benefits but to provide non-cash benefits which may, however, include payments to members in want or distress, and generally payment or part payment for the cost of dental, ophthalmic and other forms of treatment. Insured persons are not eligible for these benefits from their society until they have been members of the society for a period of on an average two and a half years, or of six months in the case of payments to members in want or distress.

Maternity Benefit

Maternity benefit is a money payment of £2 on the confinement of the wife (or in the case of a posthumous child, of the widow) of an insured man, or of a woman who is herself insured. In the case of a married woman who is herself insured the benefit is payable both in respect of her own and her husband's insurance. A married woman who is an employed contributor is also entitled to a double benefit if her husband is not insured, or, if, though he is insured, the benefit is not payable from his insurance. The qualification for this benefit is 42 weeks of insurance and the payment of 42 weekly contributions. A married woman receiving the benefit from her own insurance is required to abstain from work during the four weeks after confinement. She is entitled to claim maternity benefit for two years after the date of her marriage if she ceased to be insurably employed at that date. Some societies provide additional maternity benefits both for men and for women. This may increase the benefit to as much as £4. The total cost of maternity benefit in Great Britain was £1,665,000 in 1936.

Additional Treatment Benefits

The additional treatment benefits provided vary with each approved society. These additional benefits do not include the provision of treatment, services or appliances, but pay for the whole or a portion of the cost of these services. The societies make their own arrangements for the provision of these benefits, and here again there is diversity of practice.

The following table sets out the number of persons who are members of approved societies which provide additional treatment benefits, and the amount of money allocated to their provision. A member may not, however, claim this benefit before having been a member of the society granting it for an average of two and a half years.

The actual total expenditure on additional treatment benefits in Great Britain was only £2,894,000 in 1936.

TREATMENT, ADDITIONAL BENEFITS, GREAT BRITAIN, 1937

Nature of Benefit	Number of Schemes	Approximate Membership Covered	Annual Amount Allocated
		(000)	£
Dental	5,434	13,056	2,473,236
Ophthalmic	5,428	11,334	613,254
Convalescent Home Treatment	2,866	11,467	216,878
Medical and Surgical Appliances	4,401	12,535	217,035
Hospitals	2,437	1,876	107,187
Convalescent Home Premises	20	228	21,911
Convalescent Allowances	52	432	2,350
Want or Distress	768	6,215	37,739
Approved Charitable Institutions	417	7,506	34,625
Nursing	652	6,435	32,317
Infection	94	3,875	5,289
*Not Separately Distinguished	70	945	6,021
Donations to Charitable Institutions	699		29,782
		TOTAL	£3,798,624

* These are benefits given by units with headquarters in Scotland under the last four headings listed above.

A CRITICISM OF THE NATIONAL HEALTH INSURANCE SYSTEM

Administration

The Royal Commission on National Health Insurance in 1926 found that insurance committees were redundant bodies. For example, much of their work in connection with medical benefit had, ever since they were created, lapsed to the central departments who make collective bargains with the whole medical profession about the profession's terms of service. As a result of national arrangements of a uniform tariff for chemists' prescriptions, the pricing of these prescriptions has been taken over by joint committees of insurance committees securing a uniform method for wide areas of the country. Health propaganda could be better done by a local authority. While the matter of complaints remained important, the real work was done by the medical services sub-committee, which could equally well work for a local authority. Therefore, the advantage of securing a further unification of the health services by allowing the local authorities to absorb the insurance committees could, the Royal Commission thought, not be foregone. They suggested that the powers of the committee should fall to the appropriate committee of the most suitable local authority, with possibly some co-opted members. This general principle was upheld by the Committee on the Scottish Health Services.

Approved Societies

A strong case was made out in 1926 against the approved societies, and was accepted by those members of the Royal Commission who signed the Minority Report, and subsequently by such authorities as Sir Arthur Newsholme in his 'International Studies on the Relation between the Private and Official Practice of Medicine with Special Reference to the Prevention of Disease' (Vol. III: London 1931). The Majority Report on the other hand considered that there was no adequate alternative to the societies.

One of the most striking anomalies of the present arrangement is the variation in benefits payable to members of different approved societies. Some details of these differences have been set out on pages 204-206. These differences in benefit may occur among people living in the same street. In this way the benefits of the National Health Insurance scheme cannot be spread over the whole of the population. Moreover, it means that members of an approved society which happens to contain a large number of men who work in unhealthy or dangerous occupations are penalised. Thus the principle that the good lives should carry the bad is not maintained.

Injustices arise also when a member of an approved society, moving from one area to another, joins for convenience a new branch or society, for he may find that it does not provide so many benefits as his old organisation, and at any rate he will not be able to participate in additional treatment benefits for about two and a half years or cash benefits for four and a half years. This provision is intended to prevent societies attempting to attract members by touting. But a man or woman who becomes eligible for insurance is generally, unless he has some family or other connection with a particular society, in complete ignorance as to the advantages to be gained by joining a prosperous society.

The Majority Report of the Royal Commission recommended that to mitigate some of these injustices and yet at the same time to retain the incentive to good management, one-half of the surpluses should be pooled. It is suspected, however, that the incentive to good management, which is so much stressed by defenders of approved societies, sometimes leads to injustices to the insured person. The following table summarises the position in Great Britain at the Fourth Valuation (so far as completed up to the end of 1934):

	Societies and Branches	Total Membership	Average Number of Members per Society	Surplus or Deficiency
				£
Surplus . . .	6,420	15,378,000	2,400	37,244,000
Equality . . .	224	777,000	3,470	—
Deficiency . .	281	606,000	2,160	654,000

From this it can be seen that the average membership of the societies with a surplus and of those with a deficiency is about the same. This may be explained by the fact that while the larger societies may in some cases be more efficiently run, the smaller societies often consist of a select membership with a good health record.

It was intended, and is still declared to be a principle, that members of approved societies should manage their own societies. In fact, this does not happen. In the large industrial societies there is virtually no machinery for membership control. The rules of the two Prudential societies, each with a membership of over one million, provide for a quorum of 50, including officers and members of the Committee of Management of the society, at their annual general meetings. No notices, for example, of the annual meeting of the Prudential Approved Society for Women, are issued to members, and they do not receive a report of either the meeting or of the Committee of Management to the meeting. Thus they are treated even more as cyphers than the average shareholder. Nor do members of the smaller societies show any marked desire to control their societies. As an extreme case, in 1922 the Mayfield Temperance Friendly Society of 48 members could not obtain a quorum of 8.

The multiplication of small units causes overlapping and waste in administration. Duplication also gives the central government departments additional work. For instance, in the Report of the Royal Commission on National Health Insurance it is stated that at one time there were 98 societies each having only one member in Glasgow.

It is very difficult to obtain reliable material on this aspect, but the following table for a medium-sized undertaking concentrated in one locality in South-west England is probably reasonably typical.

Approved Society Membership among Employees of a Medium-Sized Undertaking 1937.

Name of Approved Society	No. of employees belonging to each	Name of Approved Society	No. of employees belonging to each
National Deposit F.S.	43	Army and Navy	2
Hearts of Oak B.S.	19	Prudential (3 societies)	59
Oddfellows—I.O.O.F. Manchester Unity	37	Britannic Assurance Co.	3
Royal Liver F.S.	1	Refuge	1
Y.M.C.A. F.S.	2	Co-operative Wholesale Society, Ltd.	4 4
Liverpool Victoria	3	Cotton Spinners Amalgamated Association	1
Pearl	31	National Union of General and Municipal Workers	1
I.O. of Rechabites (Salford Unity)	9	Orange and Protestant, Ireland	1
Ancient Order of Foresters	28	Scottish Rural Workers	2
Rational Association F.S.	46	Electrical Trades Union	1
Merthyr Unity Philanthropic Inst.	14	United Patriots National B.S.	1
Catholic Benefit and Thrift Society	2	Royal Naval and General	1
Church Benefit Society, Temperance and General	1	A.O. Hiberians Health Society	1
Bristol and West of England, etc., Provident Society	1	London and Manchester	2
U.A.O. of Druids	4	National Amalgamated	1
Order of Sons of Temperance	1	National Union for Insurance	2
United South London	1	Scottish Legal Health Association for Men and Women	1
Wiltshire Working Men's Conservative B.S.	1	Deposit Contributors	5
	244	TOTAL	337

The table shows that nearly forty societies, with an average membership of less than ten each, are covering the health insurance risk of this smallish group of workers, well over half the societies being represented by only one or two members. A remarkable number of these societies are local or regional rather than national organisations with their interests many miles away, and the management complain that it is practically impossible for the workers to get satisfactory advice upon the choice between these societies, or to judge in what circumstances transfer is worth while.

It is sometimes difficult for the smaller societies to make arrangements whereby their members can easily and cheaply obtain additional treatment benefits. For, unlike the larger societies, they cannot enter into nation-wide agreements.

The Minority Report of the Royal Commission on National Health Insurance further considered that the existence of the approved societies was a bar to the proper co-ordination and development of a satisfactory public health policy, and recommended that by stages the work of the approved societies should be taken over by the county councils and county borough councils. The Majority Report of the same Commission recommended that the central departments should have greater control over the rules, administration and expenditure of approved societies. Another possible development might be that, as some of the additional treatment benefits, such as dental benefit, became statutory benefits, approved societies would cease to deal with them. Consequently they would eventually be left only to administer cash benefits.

It is worth calling attention to the fact that the Irish Free State Government, by an Act passed in 1933, have set up a Unified Society for nearly all insured persons, and abolished the system of approved societies, which was previously the same in Ireland as it is in Great Britain. The Unified Society is governed by representatives of the members, the employers of insured persons and the trustees, who are nominees of the Government. Members of the new society who had the right to receive additional benefits from their approved society retain their rights under the new arrangements.

Cash Benefits

The problems of cash benefits are problems not specifically of a health nature but are connected with general questions of social insurance. Obviously, the disparities in the present system between unemployment insurance, benefit rates and health insurance sickness benefit are undesirable. An unemployed man receives 17s. a week with an allowance of 9s. for a wife and 3s. for a dependent child. The payment to women is 15s. and to young workers from 5s. to 14s. per week.* Yet it might well be said that a sick man or woman needed more money, if only to purchase additional comforts, than an unemployed man or woman. These arrangements frequently place a doctor in the embarrassing position of being asked to sign off individuals, when they still ought to be receiving medical attention, so that they may draw unemployment pay. This situation is in some cases alleviated by the payment of additional benefits but, as has been shown, this creates a number of injustices and administrative anomalies, for the amount of the benefit varies with each society. Sometimes a panel doctor certifies a man as fit for work, but the authorities responsible for unemployment insurance may hold that he is not capable of work. Consequently he cannot draw benefits under either Unemployment Insurance or National Health Insurance. Obviously, some of these anomalies should be remedied, the provision of dependants' allowances being particularly important.

---

* Standard National Health Insurance sickness pay is 15s. for a man and 12s. for a single and 10s. for a married woman, with no dependants' allowances.

Maternity Benefits

The present lump sum payment for maternity benefit is almost unique. In nearly every other country some provision is made for rendering medical services to maternity cases within the insurance system. The lump sum will cover medical attention, but, being paid in cash, is often diverted to other pressing needs, leaving the doctor's and midwife's fee still to be found. Where the mother is employed, £2 or even £4 is, of course, quite inadequate to compensate for loss of wages during the period of at least four weeks' absence from work. Further, there is a great deal of confusion about the right of those women who are insured to claim sickness benefit when they are incapacitated from work by pregnancy. Some approved societies give the benefit without question, others refer the applicant to the regional medical officer. Hardship is endured by these women, who have to make a special journey to the office of that official and, sometimes, rather than do so, they forego their rights. At the same time they are often debarred from drawing unemployment benefit. The adjudicating authorities of the Ministry of Labour are believed to regard the unemployed claimant as not "available for employment" during the last eight weeks before confinement. The woman may, none the less, have a certificate from a doctor that she is fit for "light work." A more complete system of health insurance might, of course, make provision for a cash maternity benefit to be paid in the four weeks preceding child-birth.

Additional Treatment Benefits

The anomalies connected with the payment of additional cash benefits exist in a less degree with the provision of additional treatment benefits. There is a time limit before the benefit is obtainable, and the nature of the benefit varies with each society.

Treatment of Claims

A report by the Government Actuary issued in 1930 (Cmd. 3548) showed that the sickness and disablement experience of a group of approved societies during 1921-27 had been of a very disturbing character.

Within these six years sickness benefit claims, measured by weeks of sickness, had risen for men by 41 per cent, for unmarried women by 60 per cent and for married women by no less than 106 per cent. Disablement claims for unmarried women had doubled, while for married women they had jumped by 150 per cent. The average duration of claims, ranging from 4½ weeks for men to over seven for married women, had not changed apparently, but the percentage of members claiming in each year had increased more or less steadily. Actually, of every thousand insured married women, 430 drew either sickness benefit or disablement benefit or both in 1927. Evidence regarding the numbers of recurrent claimants drawing year after year as much or nearly as much as the regulations would permit, suggested that the National Health Insurance Scheme was either being deliberately exploited by a minority of the contributors, or that it was being unduly burdened by defects of other health services and of other social assistance services, or both.

The Extent of National Health Insurance

The National Health Insurance system as it exists at present is, of course, nothing like a complete service. It makes no provision for medical services to very large sections of the poorer classes of the community. The largest gap affects the dependants of insured persons, mainly wives and children, but there is no provision to enable small traders and other persons working on their own account, with incomes of less than £250 per annum, to get medical services. Nor is there any scheme to provide medical services for those who are to be brought within the "Black-Coated Workers" pension scheme.

It is unnecessary to enlarge on the failure of the present scheme to provide all the desirable medical services. There is no provision, for example, for securing specialists' advice for any insured persons, unless the panel doctor makes use of outside agencies. Many cannot get ophthalmic, dental or other treatment through the National Health Insurance system, and others again have no means of obtaining convalescent home treatment.

THE EXTENSION OF NATIONAL HEALTH INSURANCE

In the previous sections an account was given from an administrative standpoint of National Health Insurance as it exists to-day. We now go on to consider the possibility and desirability of extending it. Basically the problem is one of making the services of general practitioners readily available to every member of every family, or at any rate the overwhelming majority. The justification for this extension is partly that it may be expected very greatly to improve that intangible asset, the general health of the nation and partly that it promises to secure offsetting financial savings in other parts of the health services. In theory there are other possible ways of extending general practitioner services apart from National Health Insurance, but in practice we find that the additional money required can in present circumstances hardly be raised in any other way.

From the point that extension of National Health Insurance is the only means of widely extending general practitioner and other medical services, we come to the question whether an actual scheme can be constructed which is practicable and worth while. Three main difficulties are encountered. The first is finance, the second how to widen the beneficiary membership of health insurance so as to include dependants and others not at present covered at all, and the third how to widen the extent of cover provided by health insurance so as to include additional services. After discussion of the general problem and of the reasons why extension of National Health Insurance alone offers a feasible solution these three difficulties will be discussed in order.

The desirability of making general practitioner services effectively available to all has been argued elsewhere in this Report, and is hardly likely to be seriously questioned. The first point at issue here is therefore whether this object can be achieved by any other method than by an extension of National Health Insurance.

The Case Against National Health Insurance

The case against the insurance system and its extension is based, according to the Committee on the Scottish Health Services, on some of the following arguments:

(1) Medical services, like elementary education, should be free to all members of the community;

(2) To extend the National Health Insurance system to cover the greater part of the population would be merely a wasteful administrative measure, since it would create machinery to exclude a very small number of people;

(3) It is cheaper to levy rates and taxes than to raise contributions;

(4) Contributory insurance should be kept for the expansion of pensions and other benefits, and therefore it is undesirable to exhaust the contributory power of the wage-earning classes in providing medical services;

(5) Medical services under a contributory system are given not according to need but according to insurance status, which depends on factors such as employment having no relation to health;

(6) All the health services should be unified under the local and central authorities.

Perhaps the most fundamental objection to the extension of medical services by extending the system of National Health Insurance is that it might hinder a proper overhauling and integration of all the medical services. This consideration weighed heavily with those who signed the Majority Report of the Royal Commission on National Health Insurance. In taking a very wide view they said: "In particular we feel sure that the wider the scope of these services (i.e. the health services) the more difficult will it be to retain the insurance principle. The ultimate solution will be, we think, in the direction of divorcing the medical services entirely from the insurance system and reorganising it along with all the other public health activities as a service to be supported from the general public funds." They reached this conclusion partly as a result of observing that the distinction between the health services which benefited the community, such as the environmental services, and the health services such as the medical service which benefited only the individual, was rapidly breaking down.

Schemes for a Public Medical Service

The alternative plans for extending medical provision by creating a comprehensive public medical service differ in their administrative and financial details and in their proposed relation to the existing insurance service. The general principle on which they would be based is the creation of a public medical service available to all persons. There would be, as far as possible, free choice of doctor, and a doctor would be paid from a central fund either on a capitation basis or on any other system acceptable both to the State and to the profession. The doctor would, of course, pass persons on to specialist institutions whenever that was necessary, and co-ordination and the elimination of overlapping between the general practitioner service and the institutional service would thus be secured.

The service would be financed by some combination of State grants, contributions from local rates and recovery of costs from patients treated, which last would inevitably involve some kind of means test. Difficulty would arise in relating any such scheme to the existing National Health Insurance system. One possibility would be to abolish health insurance and compensate the existing contributors by guaranteeing them an appropriate measure of unconditional free benefit. This would secure a really comprehensive medical service. A less drastic alternative would be to keep the existing scheme and to confine the public service to uninsured persons and to insured persons not already covered for the treatment in question. This would evidently give rise to an unfortunate administrative dualism, since health insurance would be preserved and another service would be set up alongside it.

Even if it were conveniently possible to find the necessary funds for a public medical service from some source other than insurance, it is plain that the prior existence of a great and deeply rooted national health insurance system would be a very serious obstacle. But the surmounting of this obstacle hardly seems worth serious examination because there is an even greater difficulty to be met first.

The crux of the problem is finance. Extended general practitioner and other medical services are bound to cost more. How and from whom is the additional money to be raised? It seems unlikely that the State and the local authorities could afford to shoulder the burden under existing circumstances. For some considerable time to come the service would have to be at least partially financed by the patients' own payments. Thus the argument that a free service comparable to the educational service would be provided breaks down. The state of public finances would not permit it. There is no reason to suppose that payments for services rendered are cheaper to collect than contributions, nor would it be considered equitable to charge directly a person earning £150 per annum the same as a person earning £250 per annum. To meet this difficulty a means test would have to be introduced, and a means test always discourages the use of even an essential service. Further, the charge for medical services would fall on the family at a time of economic strain, particularly if the breadwinner had suffered from illness.

If these arguments are valid it seems that the least burdensome way of raising the necessary sum would be through a more comprehensive scheme of contributory insurance. In fact the working-class are prepared to pay considerable premiums for medical insurance without any form of means test. Insurance payments are popular but means tests, however mild, have become odious. Hence the extraordinary popularity of the hospitals contributory schemes, with nearly 5¼ million subscribers of between 2d. and 4d. a week. These payments give the subscribers the right to free treatment in voluntary and very often in public hospitals without any inquiries into means by the hospital almoner.

Very large numbers of people are not covered at all by National Health Insurance, and those who are covered still find themselves left to meet much of their sickness risk both as regards treatment and loss of income. The possibilities of making good these deficiencies will be considered at some length, beginning with the question of extending the limits of the insured class. One extension, to wage-earners aged between 14 and 16, has lately been initiated by the Government in the National Health Insurance (Juvenile Contributors and Young Persons) Bill.

Scope of an Extended Health Insurance Scheme

Numerically, however, the most important section of the population outside the National Health Insurance system consists of the non-wage earning dependants of existing insured persons. If the system were extended to these persons there would be case for extending it to small traders and other persons working on their own account with an income of less than £250 per annum and their dependants. This might have to be done on a voluntary basis since the administrative difficulty of bringing them into a compulsory scheme would be almost insuperable. It might also be desirable to extend the voluntary National Health Insurance to persons with incomes over £250, for example, to those persons who come within the scope of the new voluntary insurance scheme for widows, orphans and old age pensions (males with incomes under £400 and females with incomes under £250, subject to certain conditions relating to unearned income).

In this section we intend to estimate the number of persons in the first two of these classes with a view to calculating the cost of bringing them into parts of the scheme. But we do not intend to consider the possibility of including in the scheme those with incomes over £250, since this would raise a considerable controversy as to the inroads on private medical practice or as to the amounts to be contributed towards the cost of the services by the parties concerned. In the course of the following discussion we shall also consider the possibility of improving and increasing the services provided to the existing insured population.

Dependants of Insured Workers.

The latest available estimates of the number of dependants in England and Wales are those supplied by the Ministry of Labour for the Royal Commission on National Health Insurance which reported in 1926. The Ministry estimated 1.5 dependants per insured man, and 0.15 per insured woman at that time. But the size of families is known to have been falling in the last twelve years.

The following estimate of the number of dependants of insured persons in Scotland was prepared by the Government Actuary for the Committee on the Scottish Health Services, which reported in 1936.

(1) Uninsured wives of insured men	600,000
(2) Dependent children (of school age or under) of insured men	950,000
(3) Dependants of insured widows	20,000
Total . .	1,570,000

It does not seem probable that the number of dependants per insured worker is higher in England and Wales than in Scotland. For the proportion of insured women to total adult women is about the same in the two countries, and thus the proportion of insured men who have uninsured wives is likely to be about the same. The present ratio of children under 14 to the total population is considerably higher in Scotland than in England and Wales, and thus the average number of dependants under the second and third heads above are likely to be higher in Scotland. Thus an approximate estimate of the number of dependants of insured persons in England and Wales can be made, on the assumption that the average is the same as in Scotland, and the figure thus arrived at is likely to be too high rather than too low.

The estimated Scottish dependants listed above are those of the 1,900,000 insured persons in Scotland entitled to medical benefit at that time, which excludes some voluntary contributors and those serving in the armed forces. The equivalent number for Great

Britain on December 31, 1936, was 18,200,000*, which would give 15,000,000 dependants if the Scottish average were taken to apply to England and Wales.

Independent Workers.

Mr. Colin Clark broadly estimates that there were in 1932 1,030,000 independent workers in Great Britain earning less than £250 per annum, outside the National Health Insurance scheme. According to the Scottish ratio above quoted they would have 850,000 dependants.

Other Groups.

No mention has been made here of the employed boys and girls in the age-group 14-16, who will be covered for medical benefit under the National Health Insurance (Juvenile Contributors and Young Persons) Bill. Persons receiving a contributory old age pension have either paid into National Health Insurance and the Contributory Pensions scheme, or are the wives of those who have. Therefore, they either receive medical benefit under the existing, or they would do so under the proposed, scheme, since their wives are calculated as part of the dependant class. But there are 663,000 persons over 70 who receive a non-contributory pension. They have never been in National Health Insurance, or have forfeited their rights under it, and consequently do not receive medical benefit. Yet in justice they ought to be afforded the opportunity of obtaining medical benefit. A few of them must be independent workers and, therefore, included in the above figures. Many must be more or less dependent on insured or independent workers, but no allowance has been made in the above calculations for elderly dependants. Some have been independent workers, and should logically be chargeable on the contributions of independent workers in the same way as insured persons over 65 who get benefit but do not contribute. It is impossible to allocate the numbers between these groups. A complete national scheme of health insurance for all persons earning less than £250 a year and their dependants would also have to provide for the dependants of the 305,000 men in the Army, Navy, and Air Force, who only receive maternity benefit. But it is impossible accurately to estimate the number of these since, owing to the comparative youth of most men serving in the Forces, no ratio applicable to a whole community can be used.

No account has been taken of voluntary contributors and their dependants as such, for they may be assumed to be either included as independent workers or to fall outside the scope of this section because they are earning more than £250 a year.

In effect there would always be some persons of a low income class who would never be covered by, or would fall out of, this extended scheme. For these something like the existing public assistance medical service would still be a necessity.

Measures for Extending and Improving Medical Benefit

We have now examined the numbers of people affected by the failure of the existing National Health Insurance scheme to provide medical services to the dependants of the present insured population and to independent workers with incomes under £250 per annum and their dependants. In this section we set out to make a number of estimates of the cost per head of bringing various classes of the population within the scheme, and incidentally of the cost of improving the general practitioner's services. After making these calculations we shall estimate the cost to the community of these proposed extensions.

---

* Excluding all voluntary contributors. Those with incomes under £250 can get medical benefit, and should be included, but their numbers are not known.

Cost per Head.

The cost of medical benefit to insured persons in Scotland in 1935 was at the rate of 12s. 4d. per head of the insured population. This included the doctor's capitation fee of 9s., the charge for drugs and appliances (about 1s. 11½d.), mileage (about 7½d.) and Insurance Committee administration (a little over 6½d.)*. The allowance made for drugs in England and Wales is 3s. 1d. However, the evils and undesirability of over-prescribing have already been mentioned in Chapter V, and it need only be said that the expenditure of £2,237,400 on drugs and appliances in 1935 for panel patients in England and Wales was, in the opinion of the Chief Medical Officer of the Ministry of Health, wasteful.

The capitation fee to be paid to doctors in the event of an extension of medical benefit would, of course, have to be negotiated between the Insurance Acts Committee of the British Medical Association and the Government. It is worth remarking that friendly societies often pay capitation fees of about 6s., whereas the "public medical services" referred to on page 153, pay capitation fees up to 15s. However, the Committee on the Scottish Health Services thought that a general practitioner attending all the members of one family would find the work less arduous than attending the same number of people in different households. A panel practitioner spends a certain amount of his time in dealing with the certificates which entitle his insured patients to various benefits or exemptions, but he would have far less work of this kind to do for dependants, since they would not, for example, draw cash benefits. It is probable that married women and young children would require more medical attention than those persons now in insurance, although a practitioner's terms of service would not cover attendance at confinements or even ante-natal or post-natal examinations. The older children, however, who are under the School Medical Service, and suffer mainly from infectious diseases which are dealt with by statutory services, would probably require less. Therefore, the Committee on the Scottish Health Services concluded that 6s. might be considered an adequate capitation fee. The other expenses, they considered, would remain about the same, except that mileage would be reduced to 4d. This would give a total figure of 8s. 10½d. per head per annum, or about 9s. The Royal Commission on National Health Insurance in 1926, however, considered that a capitation fee of 9s. would probably be desirable even to maintain the existing standard of service. This would give a total figure of about 12s. per head. The English allowance for drugs would bring it up to 13s.

In the above calculations we assume that the general practitioner in panel practice would give as good service as he does now. But as we have shown in Chapter V, this is hardly satisfactory, largely owing to the nature of the work involved. This is partly due to the fact that the average panel practitioner, in order to earn what he considers a reasonable remuneration, is practically compelled to take on more work than he is able to perform according to the highest standards under the present system. This is a criticism not of the individual doctor, but of the system. The largest number of persons a panel practitioner may have on his panel is 2,500, bringing him in a gross income of £1,125. One method of improving the panel service would be to decrease the total number of persons a doctor should be allowed to take. If the National Health Insurance system were extended to dependants it might be practicable to set a limit on the extent of a general practitioner's private practice in relation to his panel practice. Although the demand for medical services outside the panel service would be limited, there would nearly always be enough panel patients to enable the practitioner to obtain a sufficient income. But obviously this limit would be governed by the size of the capitation fee. For the higher the capitation fee was the lower the limit that could be fixed, and the higher the standard of service that could be demanded. The following table shows the relation between the capitation fee and the possible number of panel patients a doctor could take. The incomes of course are gross incomes, and to arrive at net incomes about one-third would have to be deducted to allow for the doctor's payment for overheads such as the maintenance of his surgery.

---

* Report of the Committee on the Scottish Health Services.

No. of persons on panel	Doctor's gross income from panel practice on the basis of a capitation fee of					
	6s.	8s.	9s.	10s.	11s.	12s.
	£	£	£	£	£	£
1,000	300	400	450	500	550	600
2,000	600	800	900	1,000	1,100	1,200
2,500	750	1,000	1,125	1,250	1,375	1,500
3,000	900	1,200	1,350	1,500	1,650	1,800
3,500	1,050	1,400	1,575	1,750	1,925	2,100
4,000	1,200	1,600	1,800	2,000	2,200	2,400
4,500	1,350	1,800	2,025	2,250	2,475	2,700
5,000	1,500	2,000	2,250	2,500	2,750	3,000

It will be seen that the capitation fees of 6s. and 9s. which we have suggested would mean that the doctor would have to have a large panel and would therefore only be able to give a service of a limited standard. It must, however, be remembered that at present a doctor with 1,000 patients on the panel will be looking after an almost equal number of dependants, who under the proposed scheme would be transferred to his panel.

In Chapter V we have put forward other suggestions for the improvement of the general practitioner service. We particularly recommend that general practitioners should work in groups in connection with a diagnostic and therapeutic "cell." The effectiveness of this development would be facilitated by an extension of National Health Insurance and by any reduction in the number of families for which each general practitioner must cope.

(2) *Total cost and sources of contributions.*

The cost of providing medical benefit for the 15 million dependants of the present insured class would be £9 millions at a capitation fee of 9s., or £6.75 millions at a capitation fee of 6s. (Both these estimates allow 3s. per head for other expenses, including drugs.) We suggest that the State should pay half this cost, and that half should be raised from the contributors. Under the existing health insurance scheme the cost is divided between the worker and the employer, with a relatively small contribution from the State. It would, however, clearly be inequitable to tax a particular group, employers of labour, for an essentially national social purpose such as medical services for dependants of workers, especially since, as we show later in this chapter, considerable offsetting savings may be anticipated to the State and local authorities as a result of such a scheme. To place the extra burden on employers would also be inexpedient, as it would tend to act as a further tax on employment.

Persons over 65 and certain others who receive medical benefit do not contribute. The total number of compulsory contributors entitled to medical benefit at the end of 1936 was 16,510,000. The extra weekly payment required from them to raise half the above sums, assuming 45 contributions a year would be 1.45d. or 1.09d. This would, in fact, entail putting an extra 1½d. or 1d. stamp weekly on each insured person's card. The sums that would be raised annually by 45 weekly contributions from 16,510,000 persons are as follows:

Weekly contribution pence	£	Weekly contribution pence	£
½	1,550,000	5	15,500,000
1	3,100,000	6	18,600,000
1½	4,650,000	7	21,700,000
2	6,200,000	8	24,800,000
2½	7,750,000	9	27,900,000
3	9,300,000	10	31,000,000
3½	10,850,000	11	34,100,000
4	12,400,000	12	37,200,000

It might not be possible to bring in non-contributory old age pensioners at a capitation fee of 9s. Certainly at 6s. that would be out of the question. The new juvenile insured class under 16, numbering a million, has been excluded from these and all following calculations. The contributors of this class will, under the new Bill, only pay 2d. per week. If this were raised to 3d. as it might well be, the finance of our proposed extensions would be correspondingly eased.

The following table summarises the cost of extending medical benefit to the principal group mentioned above, and shows the weekly contribution that would be required from the earner if the State were to pay half the cost. In the case of independent workers we have already explained that it would be extremely difficult to bring them all into the scheme, and its cost would vary in proportion to the number joining it, so that the figures given are very tentative.

		Capitation fee for dependants			
		Nine Shillings		Six Shillings	
	Estimated numbers Gt. Britain	Total Cost	Weekly Contributions*	Total Cost	Weekly Contribution*
		£	pence	£	pence
Dependants of present insured class . .	15,000,000	9,000,000	1.45	6,750,000	1.09
Independent workers .	1,030,000	620,000	1.60	620,000	1.60
Dependants of independent workers .	850,000	510,000	1.32	380,000	0.98
	16,880,000	10,130,000		7,750,000	

*Half cost.

Details in regard to non-contributory old age pensioners are as follows, but it is impossible to say how the cost of this service should be allocated amongst contributors.

	Estimated numbers in Great Britain	Total cost at capitation fee of 9s.
Non-contributory old age pensioners	663,000	£400,000

Evidence has been given in Chapter V to show that many insured persons now voluntarily secure medical services for their dependants through an insurance scheme, and that they generally pay more for each member of the family than would be necessary to cover the whole family on the above scale. Therefore, a much cheaper service would be provided by this means. Those insured persons without a family would have to regard the payment as in the nature of an insurance for the future or as a contribution towards the greater burdens of others. This, in fact, happens in the unemployment insurance scheme, in which benefits vary with the number of dependants.

In making any calculation of the future cost of an extended medical service, it would be necessary to take into account the changing age composition of the population. Increasing numbers of elderly women will almost certainly involve more sickness, but fewer births and fewer children would partly reduce the other demands on doctors. The number of elderly people who, under the present arrangement do not contribute but get medical benefit, is continually increasing. These are some of the factors that would have to be investigated in detail by the government departments concerned before framing any scheme of this nature.

Cost of Providing Consultant and Specialist Services

Those who signed the Majority Report of the Royal Commission on National Health Insurance considered that medical benefit should be extended to include specialists' services, but they thought that this service should be confined to:

(*a*) Expert medical advice and treatment for persons who can travel to meet the specialist;

(*b*) Expert advice for persons who are unable to travel;

(*c*) Laboratory services.

In the view of those who signed the Majority Report of the Royal Commission, this extension should not include specialist maternity services nor specialist advice on dental or ophthalmic questions, since these were dealt with by separate services. They refused also to recommend the inclusion of in-patient treatment in hospitals. The cost of this treatment would, they considered, be enormous, since not only would the cost of maintenance have to be provided, but also the staff could not be called upon to give their services without payment to such large numbers. Moreover, accommodation could never be guaranteed in the voluntary hospitals in the way that a contract of insurance would demand.

The Majority Report advised that a specialist service should be built up without reference to the existing services provided by the out-patient departments of the hospitals and by the local authorities. The grounds for this decision were the desirability of obtaining uniformity and doubts whether the hospitals would provide an adequate service. Distance often prevented patients from reaching the hospital, and some hospitals also were staffed by practitioners whose colleagues were not necessarily ready to seek their advice. Since 1926, however, conditions have changed. A public general hospital service has been built up as a result of the 1929 Local Government reforms, and it would be even more wasteful than it would have been in 1926 to create a dual specialist service. Moreover, as we show in Chapter VIII, a huge system of contributory schemes has grown up, under which specialist services are given in hospitals. It seems clear, therefore, that these recommendations contained in the Majority Report of the Royal Commission could not be accepted now, and that if specialist treatment and advice were made a statutory benefit its administration would have to be linked to that of the rest of the health service.

Although we disagree with the Royal Commission proposals we have used their calculations as a basis in the estimates which follow. The Majority Report proposed that the travelling expenses of persons using the specialist service should be defrayed from the insurance fund, and that specialists should be present at frequent intervals in some central place in districts where these services were not available. They thought all insured persons should be entitled to this service, but if it were extended to their dependants other arrangements might be found to be necessary. They advised that possibly clinics might be established where specialised services could be given. In this case the fund would have to make provision for the payment of the nurses and masseuses who would be required, and for the rent of the premises. In other cases the specialist's fee or the hospital's rent charge would cover these expenses. The specialists, if they worked at clinics or at hospitals, could be paid on a sessional basis, but if they worked at their own consulting rooms they would probably prefer to be paid a fee. However, this could be related to the amount of time they spent in dealing with these cases.

The Royal Commission, as a result of inquiries conducted by regional medical officers and others, concluded that the annual cost for the insured population of England and Wales at that time ($13\frac{1}{2}$ million persons) would be as follows:

Specialists' Service .	£940,000
Bedside Consultations .	£250,000
Laboratory Services .	£100,000
	£1,290,000

That is, in England and Wales the cost was put at just under 2s. per insured person. In Scotland it was put at about 2s. 9d. to 3s. per insured person. Thus they concluded that for an insured population of 15 millions the cost of the service would be about £1½ millions per year. The insured population is now about 19 millions—therefore the cost would be about £1,900,000 on the same basis. The inclusion of the 14-16 age-group would bring it up to £2 millions. We again propose that the State should pay half the cost, which would mean that the working-class contributor would have to pay ⅓d. a week. There is, however, some case for securing additional contributions from the employer in respect of existing insured persons. If this were done both the State's and the employee's contribution could be reduced.

It would certainly be desirable that this service should be included in any extension of the National Health Insurance system to dependants of insured persons. But without a detailed inquiry it is impossible to discover whether this limited service would be used more by dependants than by the existing insured class. Possibly it would not, since advice and treatment in maternity cases is excluded. In that case a sum of £1,500,000 would be required to finance it. To obtain half of this sum from the contributors would entail an additional farthing per week. On the same assumptions and with the qualifications we have mentioned on page 215, it would cost about £200,000 to extend this service to independent workers and their dependants.

Those who signed the Majority Report of the Royal Commission maintained that by this means the closest co-operation between the general practitioners and the specialists would be secured. General practitioners, unless they have mixed practices with a fair proportion of persons with means, do not have any opportunities of coming in contact with the specialist, and in this respect their standard of service should be improved. The obligation to furnish the expert with a statement of the case has a valuable educational influence. Further, the specialist's report on the case would help the practitioner.

Those who signed the Majority Report of the Royal Commission suggested various administrative arrangements to facilitate this service. The Insurance Committee would be responsible for organising the scheme. Any doctor possessing the requisite qualifications would be eligible. A list of doctors capable of performing the work would be prepared. This would include specially qualified practitioners who might be called in in acute cases to give a second opinion when a specialist was not available, which is often the case in sparsely populated areas. A mixed lay and medical committee, probably containing some medical men who were drawn from outside the area concerned, would be responsible for the scheme. Either the doctors might see the patients in their own consulting rooms or arrangements might be made for the work to be done at the hospitals.

Nevertheless, the Majority Report of the Royal Commission did not define in any detail the nature of the service to be rendered, and it is apparent that where an insured person required even a minor operation entailing a day or a few hours in bed, probably the proposed service would not provide it, since, for example, there would be no facilities in a specialist's consulting room. The Majority Report of the Royal Commission also expressly excluded in-patient hospital treatment, yet the line between a service of this kind and in-patient treatment is hard to draw. The creation of a service of the kind proposed would create a dualism in the health services which, while it might be temporarily justified, could hardly in reason be prolonged. This dualism, with the growth of public hospitals, would be greater now than it would have been in 1926. The dilemma presented by the suggestions for the creation of this service in fact, only illustrates the need for a completely planned health service combining a general practitioner and a nursing service, the specialist and the hospital services. This is possible within an insurance scheme, but only if the insurance scheme is comprehensive enough to cover both general practitioner services and hospital services. We shall indicate in other chapters that this is probably the goal to be aimed at and we regard any extension of health insurance on the lines suggested above as only a stepping-stone to securing this. We also consider that as far as possible, despite the difficulties suggested in the Majority Report of the Royal Commission, it should be integrated with existing services. Certainly we would deprecate the creation of any institutions which might be regarded as in any way competing with the existing public and voluntary hospitals since there is already sufficient confusion in the hospital service without adding to it.

Extension of Additional Treatment Benefits

Many approved societies pay the whole or part of the cost of certain forms of treatment, the chief of which are dental and ophthalmic. It is generally agreed that much ill-health is due to lack of dental care, and an extension of this service would in the long run undoubtedly cause substantial savings in other directions. In 1937, 13 million people in Great Britain belonged to societies which give dental benefit, but in most cases members have to find half the cost themselves, and thus many do not get adequate care.

Cost of Extending Dental Benefit

The experiences of approved societies give very little guide to the cost of a full dental service for all insured persons, since if dental benefit became a statutory benefit it would be very much more used, although after arrears had been made up each individual treatment would probably be much less serious than at present.

The Royal Commission estimated that the cost per case treated would be in the initial stages at least as high as £4 per year, since there would be a heavy demand for dentures, and they suggested that 5 per cent of the insured population might be expected to apply for treatment annually. On this basis the cost would be 4s. per head. The weekly contribution required from insured persons to finance half the cost would be just over ½d. The estimated total cost of providing for various groups would be:

	Numbers (millions)	Cost £
Insured Population 1936 .	19	3,800,000
Employed Juveniles 14-16 .	1*	200,000
Independent Workers† .	1	200,000

* The number of juvenile contributors is expected to have fallen to ¾ million by 1943.

† The same qualification as is mentioned on page 215 applies here.

These estimates would probably be exceeded in the first year of the scheme. The Royal Commission estimated the proportion of insured persons needing dental treatment as 60 to 80 per cent. This high initial cost is one of the great difficulties in introducing the service, but, clearly, it must be regarded as an investment.

Without detailed inquiries into the sex and age distribution of persons with dental defect, it is impossible to make any accurate estimate of the number of persons who would require dental treatment if it were extended to the dependants of the existing insured class. Moreover, a large number of dependants undergo dental inspection through the school medical service and some receive treatment, towards the cost of which their parents contribute. It would not be impossible to integrate this service and that provided through an insurance scheme, but financial problems would arise relating to the question of who should bear the cost of the service. Yet at the same time, as we have pointed out in Chapter VI, the dental service is sadly deficient. If it could be assumed that the incidence of dental defect among the dependants of insured persons was not greater than that among the insured class it would cost roughly another £3 millions to include the dependants of insured workers in the scheme, which would entail a further additional contribution of ½d. from the existing insured class. On the same assumptions the inclusion of the dependants of independent workers would cost about £170,000 and would entail ½d. contribution.

At present £2,473,000 is allocated to dental benefit by approved societies. This sum is derived from their surplus and is legally the property of the members of each individual society. If sickness rates increase and interest rates fall, these surpluses may be diminished. But, even if dental benefit were made a statutory benefit, it seems not unreasonable that some of this surplus should be utilised to finance a statutory benefit. Moreover, the burden on more than 2½ million persons who contribute to the Hospitals Contributory Schemes providing dental benefit would be reduced, since they subscribe partly in order to receive financial assistance towards dental treatment which would be provided for them under the scheme above outlined.

Those who signed the Majority Report of the Royal Commission in 1926 considered that even if a complete dental service could not be introduced, a restricted scheme including all insured persons could be created. For example, conservative and operative dental treatment might be made a statutory benefit. But insured persons would still have to contribute towards the cost of dentures. In practice such a distinction would be extremely difficult to administer.

Professional Problems

Those who signed the Majority Report of the Royal Commission considered that the method of paying dentists might become a matter for controversy if dental benefit became a statutory benefit. It would probably have to be on an attendance basis, with an agreed scale specifying the fee for each separate kind of service, or payment on a time scale at so much a session. It is also probable that there are insufficient qualified dentists at the moment to provide an adequate service. The professional problems involved are discussed in greater detail, and an account of existing dental services is given, in Chapter VI.

In Chapter VI also a description is given of the ophthalmic services and the professional problems involved. It can be seen from that description that until some of these problems are solved it would probably be premature to make ophthalmic benefit a statutory benefit.

Cost of Improved Maternity Benefit

At the moment every insured woman and the wife of every insured man is covered for maternity benefit. Thus the whole insured class are included within the National Health Insurance system for maternity benefit. But the British system of health insurance is unique in the absence of any provision in it for giving medical and other services to the woman concerned during her confinement.

We have shown in Chapter IV how the Midwives Act 1936 will improve the maternity services in England and Wales, and the Maternity Services (Scotland) Act 1937 will make even better provision in Scotland. We have also outlined the manner in which the Departmental Committee on Maternal Mortality and Morbidity suggested that the English and Welsh services could be improved. The existing services and the proposed service for England and Wales are based on the assumption that the local authorities administer the services and recover the cost of it from the women concerned, where these can afford it.

We have proposed that all the dependants of insured persons should be entitled to medical benefit and, therefore, most pregnant women in the classes concerned would be under the supervision of their general practitioner from the beginning of pregnancy. But it would not be equitable to expect the general practitioners to carry out the ante-natal and post-natal work we have stated that we consider necessary as part of their normal duties on the basis of the capitation fees we have suggested. Therefore, funds would have to be forthcoming to finance this service. In Scotland the new service is to be paid for by the local authorities, who will then be entitled to recover, it is suggested, about £1 10s. 0d. from every mother who avails herself of the service and can afford that sum. But in 1926 it was stated in the Majority Report of the Royal Commission on National Health Insurance that it was estimated that a service, which was less comprehensive because it made no provision for specialist services and only for one ante-natal and one post-natal examination, would cost £2 5s. 0d. for every confinement. It was considered that the midwife's fee would be £1 10s. 0d., 5s. would be the fee due to the general practitioner to cover his risk of having to attend the confinement, and 10s. would be the fee for the two examinations suggested.

Maternity benefit under the National Health Insurance system is designed to enable the family of an insured person to meet some of the costs involved in child-birth, and it amounts to £2 on the confinement of a wife of an insured man or of a woman who is herself insured. In the case of a married woman who is herself insured the benefit is payable both in respect of her own and her husband's insurance. A married woman who is an employed contributor is also entitled to a double benefit if her husband is not insured or if, though he is insured, the benefit is not payable from his insurance. A married woman is also entitled to claim maternity benefit for two years after the date of her marriage if she ceased to be insurably employed at that date. Consequently, maternity benefit amounts to the payment of at least £2 to all women in the classes we are considering, and of £4 to many of them, apart from any additional benefits paid by particular approved societies. Apparently, however, between £1 10s. 0d. and £2 5s. 0d. would be required to finance the medical and midwifery services we propose. Yet a cash benefit is necessary to enable the mother to meet the additional expenses connected with child-birth. Those who signed the Majority Report of the Royal Commission on National Health Insurance considered that the cash benefit could not be reduced below £1 and that it was doubtful if it would be feasible to put it so low. Nor would it be desirable, since the cash benefit enables the mother to employ help in her home and make necessary purchases. Moreover, if the family economy is dependant on the mother's earnings, cash benefits help to fill an inevitable hiatus. Consequently, it may be concluded that a standard maternity benefit of between £2 10s. 0d. or £3 5s. 0d. is required, but if the mother is herself insured only the benefit devoted to non-medical services, namely, £1, need be paid twice. Thus the addition to the present standard benefit would be £1 5s. 0d. where only the husband is insured, and 5s. where the wife is insured.

We have already argued the general case in favour of insurance rather than a recovery of cost system, and we consider that it is as applicable in the case of the maternity services as of any other services. We consider, however, that it could be linked to the existing maternity service schemes of local authorities, since these authorities could recover the cost of the service, or such proportion of the cost they considered necessary, from the insurance fund. A reduced cash maternity benefit could be paid to the insured person, unless it was decided that maternity benefit should in the case, for example, of an insured woman, compensate her entirely for loss of wages in the four weeks after child-birth during which she may not work, or even during the six weeks or so before child-birth, during which many authorities consider she should not work. The arrangements we propose would enable the local authorities in England and Wales to create a service comparable to that existing in Scotland, although it might be modified to suit English conditions and be co-ordinated with the existing clinics.

The material is not available for a detailed estimate of costs, but the probable order of magnitude may be roughly assessed by assuming that the fathers of four-fifths of the babies born in a year are within the National Health Insurance scheme. Taking the 1936 figure 694,587, of total births in Great Britain, an additional cost of £1 5s. 0d. would be incurred in respect of 556,000 births, that is just under £700,000, if none of the mothers were also insured. Each insured mother would reduce this sum by £1, and if one-third of the mothers were insured it would be £515,000, but £700,000 may be taken as an outside figure. This is equivalent to ¼d. per insured person. If we assume that this additional cost would be borne in equal proportion by the State and the contributor, an extra contribution of 0.125d. would be required from every insured person.

In order to estimate the cost of providing maternity benefit to independent workers, it would be necessary to have some knowledge of the numbers of births occurring annually in this class, and the number of mothers who were working. The available data are insufficient to justify any estimates on these lines.

Administrative Problems

It has been suggested that some of the surplus funds of the approved societies should be utilised for the purposes outlined above. The Minority Report of the Royal Commission primarily based its case for the abolition of the approved societies on the inequality of the benefits provided. The Majority Report favoured the utilisation of about half the surplus for the benefit of all contributors. This, of course, would be a reversal of the policy of the original Act, which gave complete control over the surplus to the approved societies, and might meet with opposition from the many interested bodies, including the trade unions and the industrial assurance companies. Moreover, there is a possibility that the surplus will have diminished at the next (Fifth) Valuation, since interest rates have fallen since the last Valuation. Any extension of medical benefit to the dependants of the insured class would not affect the societies as such, but to make some additional treatment benefits statutory benefits would, of course, give them greater surplus funds if these benefits were financed entirely out of increased contributions. These funds could, and probably would, be used to improve the additional treatment benefits remaining and to raise the rate of additional cash benefits.

It is probable that as the National Health Insurance system extends, as it very well may do, making successively dental, ophthalmic and other treatments into statutory benefits, the administration of these benefits will be removed from the approved societies to the insurance committees. The principle that the statutory medical benefit should not be administered by the approved societies has long been established, and ultimately it is, in our view, desirable that so far as possible the whole treatment side of National Health Insurance should be administered by independent bodies, and not by the approved societies.

It has been assumed in the above discussion that if the benefits of National Health Insurance were extended to the dependants of insured persons, the present contributors would bear the cost equally, irrespective of the number of their dependants. Undoubtedly, there would be murmurings against this arrangement, although it has been adopted in the payment of dependants' allowances to unemployed persons under the Unemployment Insurance Scheme. But administratively it is far the simplest. Moreover, it can be justified on the grounds that single men or women are making provision for the children they may have. Further, it can be maintained on the principle that those with large families are least able to bear the burden of additional contributions, and therefore all should pay alike. Already local rates based on the size of house occupied and many indirect taxes bear much more heavily on the larger families, and it would be unwise in view of the trend of population not to take every opportunity of correcting this disparity.

It is possible that if medical benefit were extended to the dependants of insured persons there would not be sufficient doctors to deal adequately with the new demands put upon them. There would probably be a very heavy demand for increased services, such as has occurred where the free choice system has been introduced for district medical officers. Undoubtedly, also, if dental benefit were extended, the numbers in the profession would have to be very considerably increased. In the case of the medical profession, supply would probably adjust itself to demand in a comparatively short time, since medical schools could be extended to deal with the demand. But there might be some undesirable lowering of the standard of entrants to the profession. There is reason to suppose that the dental profession, on the other hand, would have much greater difficulty in meeting the new demand.

Capacity to Pay

The working-class contributor's half share of the cost of extending medical benefit to dependants according to the scheme outlined in this chapter would require an increase of weekly health insurance contributions by 1½d. a week, assuming a doctor's capitation fee of 9s. (see pages 216-217). The altered and improved maternity benefit that we propose would cost every insured person one-eighth of a penny if the State and the contributor each bore half the cost. The contributor's share of the cost of providing consultant and specialist services to the existing health insured class and dependants, subject to the qualifications stated on page 215, would amount to just over an extra ½d. a week. The contributor's share of extending dental benefit to all insured persons may be estimated at under ¾d. per week. In fact, the additional contribution required to finance the three last-named services amounts to just 1¼d. Since insurance stamps are only sold in denominations of 1d. and ½d., the additional contribution to finance all the above services would have to be 3d. per week, unless the margin between 2¾d. and 2½d. could be saved by administrative or other economies. 3d. a week added to the existing health insurance employee's weekly contribution of 4½d. for men and 4d. for women, would make the weekly health insurance payment 7½d. for men and 7d. for women. While any increase of compulsory fixed payments by workers must be very critically weighed, it can hardly be contended that either the amount of the increase or even the amount of the total sum are very formidable in relation to working-class income and expenditure, and in relation to the value of the benefits assured.

Without some sort of insurance cover it is impossible for many wage-earning families adequately to provide against the risks of ill-health. Recognising this, large numbers have joined various voluntary schemes, with the result that a patchwork of unco-ordinated and often high-cost organisations are growing up, dealing with fragments of what is essentially a national problem. On pages 149-154 we have shown what large levies are paid by many families for additional medical aid over and above the existing health insurance scheme. For example, the London Public Medical Service, which is largely ancillary to the health insurance scheme, has subscription rates varying from 4d. or 6d. a week for one subscriber to 1s. 1d. for four subscribers. In spite of rates of 2d. to 6d. per head per week, such services already cover about 600,000 persons, and are rapidly increasing their membership.

Besides subscribing to these schemes, many wage-earning families contribute to hospital contributory schemes, to which they generally pay another 2d. or 4d. a week. Besides hospital services, contributors to these last receive other benefits such as dental and ophthalmic treatment (see Chapter VIII). If National Health Insurance were extended there would probably be less demand for out-patient treatment, and some of the extra hospital benefits would be provided through the National Health Insurance scheme. Consequently, weekly contributions to hospital contributory schemes might be reduced.

It is not to be expected that any of the contributions now paid voluntarily to friendly societies to secure additional sickness pay over and above statutory sickness benefit would be diverted to pay for the extended schemes of health insurance referred to above.

The largest amount of voluntary insurance, however, is in life and endowment policies. There are about two policies per head in the community, amounting in 1935 to

93,607,523 outstanding policies yielding an annual premium income of £63,725,886. These policies are held almost entirely by members of the working-class. A working-class family is, in fact, often paying at least 1s. per week, and sometimes as much as 2s. or more, to maintain these policies. The whole system has been very severely criticised in 'Industrial Assurance—An Historical and Critical Study,' by Sir Arnold Wilson, M.P., and Professor Hermann Levy.

Management expenses for industrial assurance swallow up a third of the premiums paid—a ratio twice as high as for health insurance and nearly five times as high as for unemployment insurance. The management of life, health, and unemployment insurance is different. But, undoubtedly, the chief difference is the fact that two of them, one completely and the other partially, are nationalised, and do not employ competitive agents and advertising. Industrial assurance companies and societies, however, devote large sums to the employment of agents, to methods for inducing the gullible to insure, and to obtaining business from their rivals. Some reform of the present system is desirable. Of whatever kind this reform is, it would undoubtedly release a proportion of working-class savings for other insurances, such as health insurance.

Justification for the State Contributions

In Chapter XV we show that the annual cost of ill-health runs well into nine figures. A substantial part of the loss is incurred because disease is not treated until it is in an advanced stage. This is largely due to the fact that doctors' and dentists' fees are an expense which many people are loath to incur. Others refuse to make use of the district medical officer's service because they do not wish to apply through the Public Assistance Officer. Others, again, dislike the long waits at the out-patient departments of the hospitals. There is, therefore, a strong case for the extension, for example, of general practitioner services to the dependants of insured persons on the general ground that it will help to diminish the costs and evils of ill-health. Of course, no accurate estimate can be given of this saving. It has already been shown in Chapter XII that one of the great weaknesses of the present British system of medical services is the decline of the family doctor who, according to most informed views, has an ever more important function to fulfil in the health services.

If the general practitioner services were widely extended, specific savings in other services would follow. Thus, the expense of the district medical officer's services would be largely saved. Similarly, some of the services now performed by the outpatient departments both of the public and the voluntary hospitals would no longer be needed. Savings might also be possible in connection with the School Medical Service and the Maternity and Child Welfare Service. At present also the public assistance authorities sometimes make grants to enable persons needing, for example, dentures and glasses, to obtain them and the hospitals provide some dental and other treatment. Above all, the hospitals, public and voluntary, provide nearly all the specialist advice and service which is available for the poorer classes and an extension of National Health Insurance to enable people to get a part of this service through the insurance system would save them a considerable sum of money.

The Committee on the Scottish Health Services state: "that the inadequacy of general medical attendance adds to the cost and interferes with the efficiency and prevents the sound development of many of the health services provided by statute." The savings to the local authorities and others, therefore, that a measure for extending National Health Insurance might secure should justify State expenditure on it. It is better business for the taxpayer and ratepayer to help people to avoid becoming seriously ill than eventually to have to foot the bill for years of neglect of elementary treatment.

Conclusion

In this section we have tried to show that at the present time the most suitable way of financing extended medical service is by a contributory insurance system. Elsewhere we have shown that the extension of the general practitioners' services is one of the most necessary extensions of the medical services in this country. Here we have estimated the cost of extending this service to the dependants of insured persons and others. We have also discussed the possibility of improving the insurance medical services by including consultant and specialist services and dental benefit in it. Moreover, we have shown that a national maternity service should be linked to the insurance system more closely than it is now. We have attempted to show that the cost of these improvements, particularly that of extending the general practitioner services to the dependants of insured persons, is not prohibitive, and that partly by savings on other insurances the working classes could probably afford to carry the burden of half the cost. The State we consider should finance the cost of the other half of the services and would in turn enjoy considerable offsetting savings as well as the advantages of a healthier population.

VIII. INSTITUTIONAL TREATMENT

The Hospital System of Great Britain: The Voluntary Hospitals—Government—Finance—Hospital Contributory Schemes—Patients—Paying Patients—Staff—The Problem of the Special Hospitals—The Problem of the Size of General Hospitals, particularly in relation to Teaching—Co-ordination of the Voluntary Hospitals—Peculiarities of the Voluntary System—its justifications?—**Public Hospitals:** Authorities—Government—Finance—Medical Staff—Patients—The Problem of Special Hospitals—Administrative Problems of Public Hospitals—**National Hospital Problems:** The Adequacy of Hospital Accommodation—Co-operation between Voluntary Hospitals and Public Hospitals—The Geographical Distribution of Voluntary and Public Hospitals—Conclusions—**Ambulance Services—Convalescent Homes and Nursing Homes: Convalescent Homes**—Types of Convalescent Care—Financial Aspects of Convalescent Care—Conclusions—**Nursing Homes.**

In the first section of this chapter we intend to consider the provision of hospitals in Great Britain. The hospital system has grown from many different roots and is consequently of a very diverse nature. Hospitals may be broadly classified in a number of different categories. They may be voluntary or public, general or special, and teaching or non-teaching hospitals. The division between voluntary and public hospitals is primarily a constitutional matter. The voluntary hospitals are institutions responsible only to themselves, while the public hospitals are under the control of local authorities responsible to a democratic electorate. The voluntary hospitals must, therefore, finance themselves as best they can, but the public hospitals are maintained mainly out of taxation. In this section of the Report we do not intend to enter into a discussion of the justification of the use of the word voluntary in this context but in Chapter XVI we shall have to consider it. The divisions between general and special hospitals and teaching and non-teaching hospitals relate to their function and to the persons they serve.

We shall consider the special hospitals as part of the hospital system, but we shall not deal with the statutory tuberculosis service or venereal disease service in detail. Nor shall we deal with the special institutions making provision for mental defectives or for mental patients, except in so far as mental patients are dealt with in general hospitals and in some special hospitals. In Chapter IX we shall deal with these services and with others. This often entails the consideration of the hospital provision in the country from a special angle, but it makes no difference to our findings set out in this chapter, it rather reinforces them. To avoid confusion, and owing to the immature state of their organisation, we have separated our account of the provision of ambulance services, convalescent homes and nursing homes from the main account of hospital services.

THE HOSPITAL SYSTEM OF GREAT BRITAIN

THE VOLUNTARY HOSPITALS

A few of the voluntary hospitals were founded and endowed by pious churchmen in the Middle Ages. St. Thomas's in London, which has a national and international fame, was founded before the Conqueror's sons were dead. Other hospitals were built in the eighteenth century by rich citizens who were proud of their towns. But most of them were built to succour the need of populations which flowed to the towns during the Industrial Revolution. There are about 1,013* of these hospitals in Great Britain. They had in 1935 an income of £16 million. They treated about 7 million patients (1,275,000 in-patients and 5,644,000 out-patients). They had about 80,000 beds available and 1,000,000 surgical operations under a general anæsthetic were performed in them. All the Medical Schools except the British Post-Graduate Medical School at Hammersmith are associated with a large voluntary general hospital. In the voluntary hospitals is also done the greater part of the medical research work carried out in Great Britain.

Government

One of the implications of the word "voluntary" in connection with hospitals is that hospitals described as such are not governed by any organ of local or central government. They may charge for the work they do and may pay some sections of their staff high salaries. They may be, and very frequently are, public bodies in the sense that they have obtained charters of incorporation.

Legally, the government is vested in trustees, governors or other persons who contribute more than a fixed amount annually to the hospital, or who have made a large donation to it. The qualifying subscription varies from about 1 to 5 guineas, and the donation from 5 to 50 guineas. Whatever the body is its influence on the policy of the hospital is no more than that of the meeting of the shareholders of a company on the policy of a board. Like it, the governing body generally has a meeting once a year to which an annual report is presented. But the determination of policy rests with the Committee of Management, the Board of Management or the Grand Committee, which is very like the board of a company. The members are often distinguished men of proved ability in the professions, industry or commerce, who give their services free to the hospital. The medical staff are sometimes represented on the Board, which is always in close contact with the medical committee.

Since the War, other bodies, such as the local authorities, the British Red Cross Society and the Contributory Schemes Associations have come frequently to have representatives on the Board, partly in recognition of their financial assistance to the hospitals. This innovation shows how the voluntary hospitals are becoming an integral part of the public services and ceasing to be merely the domain of charitably-disposed persons. There are generally several other committees dealing with particular subjects, such as the House, the Finance, Nursing, Appeal and Building Committees. One of the most important is the Medical Committee, which represents the staff and plays a large part in determining the medical policy and practice of the hospital. For example, it makes recommendations for staff appointments which are not often ignored.

---

* The following figures, and most of those relating to voluntary hospitals in the report, are taken from the Hospitals Year Book 1937, issued under the auspices of the Joint Council of the Order of St. John of Jerusalem and the British Red Cross Society and British Hospitals Association (incorporated) and published by the Central Bureau of Hospital Information. In 1935 there were 1,013 voluntary hospitals listed in the Directory in the Hospitals Year Book, of which 960 furnished figures. Voluntary institutions for defectives, for mental patients and for incurables are not included in these figures. The figures cover those for auxiliary hospitals attached to voluntary hospitals whose use is confined to patients in the controlling hospital. Some of these are in fact convalescent homes. But the figures are not even comprehensive for all convalescent homes connected with voluntary hospitals, quite apart from the independent voluntary convalescent homes. The figures quoted in this report in relation to voluntary hospitals always refer to Great Britain with the addition, owing to the classification employed in the Hospitals Year Book of the Channel Islands and the Isle of Man.

Finance

The voluntary hospitals have faced a tremendous financial problem since the War, and despite the depression the majority of them have temporarily overcome their financial difficulties. At the present time, taken as a whole, they have an annual maintenance surplus of over £1,000,000. In the estimates made by the Central Bureau of Hospital Information and by the hospitals making returns to it, maintenance income is reckoned as income derived from all sources, except legacies earmarked for special endowments or for particular buildings and equipment, and includes that derived from free legacies. In 1935, hospitals in the King Edward's Hospital Fund for London area (the area within a radius of 11 miles from St. Paul's) had a surplus on capital account of £110,000, but among hospitals in the provinces there was a net deficit of the same order, while in Scotland receipts and expenditure were balanced. The position of the capital account varies widely from year to year. In 1931, 1932 and 1933 there was a total deficit among the voluntary hospitals, which was almost exactly offset by a surplus of £450,000 in 1934.

Summary figures such as these are, however, misleading, for most of the voluntary hospitals are financially separate entities. Thus, in spite of the net surplus on maintenance account of £1,000,000 in 1935, 293 of the 960 hospitals in Great Britain making returns to the Central Bureau of Hospital Information had a deficit which amounted in all to £334,000.

After the War, when their financial situation was particularly acute, since capital expenditure had been postponed for four years, the Voluntary Hospitals Commission* was set up, on the recommendation of the Cave Committee†, to distribute £500,000 voted by Parliament to enable them to make up their arrears of building. Since then they have received no direct grants from the central government. At the same time, there has been an insistent demand for larger, better-equipped and modernised hospitals. Wages and costs have risen, except in the years of the depression, and other claims and increased taxation have levied a toll on the incomes of these persons who, under different conditions, might have given more lavishly to the hospitals.

Although income from charitable sources has been rising it has not been rising fast enough. Thus, from 1922-26, the annual income from subscriptions and donations of the hospitals in the area of King Edward's Hospital Fund for London averaged £800,000; it rose in the good years, 1927-30 inclusive, to over £1,000,000, and never fell in the subsequent four years below £960,000. In 1935 and 1936 it was respectively £956,000 and £1,011,000.‡ Similarly, their income from legacies has increased rather than diminished.

---

* This Commission ceased its work and dissolved in 1928, after distributing the money voted by Parliament and issuing four reports on hospital policy. It must be distinguished from the Voluntary Hospitals Commission set up by the British Hospitals Association in 1935 which is referred to later in this chapter without qualification as the Voluntary Hospitals Commission.

† Voluntary Hospitals Committee Final Report, 1921 (The Committee was set up by the Minister of Health in January, 1921).

‡ Statistical Review of the Work and Finance of the London Voluntary Hospitals for the year 1935 and for the year 1936, published by King Edward's Hospital Fund for London.

Nevertheless, the voluntary hospitals have had to discover new means of raising money, and methods of recovering a proportion of the cost of maintenance and treatment from patients have been evolved. For out-patient attendances, contributions are invited, sometimes on a flat rate basis and sometimes on a sliding scale proportional to means. The latter method is always adopted when contributions are invited from in-patients towards the cost of their maintenance.

Approved Societies have been urged successfully to include hospitals in their "additional benefits," and sometimes they have been induced to grant the hospitals small donations out of their surpluses. The local authorities, and therefore indirectly the State, pay the voluntary hospitals for the patients whom they send to them and for the work the hospitals undertake for them. Further, local authorities have power, which some of them have used, to make a direct grant to voluntary hospitals and to levy up to 1⅓d. rate to finance this grant. Legislative action has also given the hospitals the right to recover from insurance companies the cost of treating emergency cases due to road accidents. But, most successful of all has been the creation of Hospital Contributory Schemes yielding a large income from small weekly contributions.

The following table shows how the maintenance income of the 960 hospitals making returns to the Central Bureau was raised in 1935.

Maintenance	London		Provinces		Scotland	
	£,000	Per cent	£,000	Per cent	£,000	Per cent
Subscriptions	1,334	31	672	8	164	11
Donations, Entertainments, etc.			887	11	176	12
Congregational Collections			109	1	22	1
Contributory Schemes, etc.	1,369	32	2,155	27	185	13
Patients' Contributions			1,721	22	145	10
Public Services	296	7	616	8	67	5
Other Services	68	2	—	—	—	—
Investments	677	15	894	11	318	22
Other receipts	—	—	59	1	24	1
Extraordinary means (Nearly all in free legacies.)	581	13	860	11	372	25
Total available for maintenance	4,325	100	7,973	100	1,473	100
Capital receipts	927	—	1,224	—	365	—
Of which earmarked legacies	*94*	—	*251*	—	*160*	—

This table shows the large proportion of income now derived from patients, either directly, through contributory schemes, or through payments made by local authorities.

In the provinces these items together made up 57 per cent of the total maintenance income. We have already shown that hospital boards of management have been affected by this development, since they have been modified in accordance with the principle of no taxation without representation.

The financial situation may also be viewed in the light of the amount of money "per available bed," which affords an opportunity of reckoning the cost of increasing accommodation to meet current needs. The total maintenance income of the voluntary hospitals in Great Britain per bed declined in the depression between 1931 and 1933, but recovered, partly owing to the growth of contributory schemes, in 1934. Expenditure per available bed fell continuously between 1931 and 1933, a period of falling prices, but rose in 1934 owing to the rise in salaries and wages.* As the Report of the Voluntary Hospitals Commission pointed out, these facts make the position of the hospitals with deficits peculiarly difficult, since they have apparently no opportunity of making good their losses.

The Report of the Voluntary Hospitals Commission considered the possibility of the creation of a common pool to which the voluntary hospitals should contribute a proportion of their income. But they considered that "the minds of the supporters of the voluntary hospitals" were not sufficiently prepared for this. Therefore, they advocated the setting up of Regional Funds, comparable to the King Edward's Hospital Fund for London. This, they thought, would educate donors to help hospitals as a whole, and would even possibly help to eradicate what they described as being frequently a "damnosa hereditas," or a legacy for specific purposes without adequate endowment for maintaining the service rendered. Further, it would give the recommended new Regional Councils the executive power, which always goes with the power of the purse, to enforce uniformity wherever that was desirable. One of the objects of regional organisations would be to prevent "poaching" in the appeals of various hospitals. Nevertheless, the Report held that the central or main hospitals had a right to appeal for funds over a regional area and that some of the teaching hospitals had a national reputation which justified them in making a very wide appeal.

Hospital Contributory Schemes

The importance of contributory schemes in hospital finance has already been mentioned. Only the Hospital Saturday Fund for London was founded before the War. The other schemes have developed since 1918, and most of them in the years between 1929 and 1934. Thus, in the year ending July 31, 1929, the Hospital Saving Association's income from contributions was £320,713, but by 1934 it had more than doubled, and in 1936 it was £923,121. The 114 schemes making returns to the British Hospitals Contributory Schemes Association had in 1935 a contributory income of £2,653,000, and a total income of £2,722,000, derived primarily from the 2d. or 3d. weekly contributions of about 5,241,000 subscribers. Probably at least 10 million persons are covered by these schemes, since the subscription is generally on a family basis. These figures are not exhaustive, for there are a considerable number of schemes which have not affiliated themselves to the Association, and many small schemes, often associated with cottage hospitals, which are probably ineligible for affiliation.

---

* These estimates over a number of years are never absolutely comparable, since some hospitals fail to make returns and others which had not previously done so begin making them.

Most schemes limit their membership to those in the lower income groups. The largest, the Hospital Saving Association, and others, have adopted with slight modification the B.M.A. scale as set out in the B.M.A.'s 'Proposals for a General Medical Service for the Nation.' This confines the membership of a contributory scheme to married couples with a child or children and an income of not more than £300 per annum or £6 per week, and to those with smaller incomes but proportionately less family responsibilities. The rate of contributions is also frequently adjusted to whether a person is single, married, a parent, or in receipt of an old age pension. Sometimes employers subscribe to schemes in proportion to the number of their employees subscribing. Thus, in Sheffield, the employers of over 150,000 out of 180,000 subscribers contribute, in addition, one-third of what their employees subscribe. The subscribers are often organised in territorial and factory groups. Voluntary or paid organisers collect these subscriptions, and it must be borne in mind that office and factory collections are habitually made by one or more workers during working hours, thus adding a real cost which is often overlooked and may be quite appreciable where there is a large membership.

Subscribers and their dependants receive free treatment in the voluntary hospitals, without prejudice to the right of the hospitals to select their own patients. By arrangement also, subscribers generally have the right to free treatment in public hospitals. A number of others receive additional rights. The Hospital Saving Association, with 1,655,429 subscribers, allocates 15 per cent of its income for additional treatment. Thus in 1935, according to the returns to the British Hospitals Contributory Schemes Association, the following numbers of subscribers to the schemes making returns to them were entitled to these privileges:

Convalescent home treatment	3,976,000
Ophthalmic treatment	2,120,000
Surgical aid	3,088,000
Dental treatment	2,352,000
District nursing	1,475,000
Maternity allowances	243,000

These benefits generally cover dependants as well as subscribers, except in the case of dental treatment. For example, the Hospital Saving Association confine dental treatment to subscribers and finance only half the cost of treatment or dentures falling on the subscriber up to the maximum of £2. Thus, if a subscriber incurred an expenditure of £4 and his approved society paid £2, the Hospital Saving Association would only pay £1.

The second largest contributory scheme in the country is the Birmingham Hospitals Contributory Association. It serves Birmingham, Lichfield, Smethwick, Halesowen, Kidderminster, Oldbury, Tamworth and the intervening area. Members pay 3d. per week. Old age pensioners and widows and blind persons need only pay 2d. per week. Although there is no income limit to membership, free treatment in the voluntary and municipal hospitals is restricted to persons of the wage-earning classes, and no payments are made to assist patients in private wards. Members and their families are entitled to free surgical aid, to free convalescent home treatment, to free treatment by the district nurse, and to the free use of the ambulance service. At the same time the Association protect themselves against fraud by insisting that a member applying for hospital treatment must have a doctor's certificate and produce a voucher showing his or her payments to the Association to be up to date. Similarly, before the district nurse visits a home she must have a certificate from the member's doctor. The medical staff at the hospitals can, at their discretion, if they have too much work or for other reasons, refuse to admit members. In 1935 there were 505,000 members who contributed £352,502, and 58 per cent of the total income of the scheme was given to the voluntary hospitals in Birmingham. The public hospitals and outside hospitals received respectively 10½ per cent and 8½ per cent in payment for services rendered, 18 per cent was spent on the other services, and 5 per cent on administration. The contributions are collected on a territorial basis or in factories. Twenty voluntary hospitals and similar institutions are directly associated with the scheme, and receive grants according to the services they render to members. Outside hospitals receive 7s. per day for treating members, and the public hospitals 27s. 6d. per in-patient case and 2s. 6d. per out-patient case.

Some other schemes collect their funds on the 1d. or 2d. in £1 basis, and prevent persons earning over a given amount, generally £200 to £300 per annum, becoming members of the scheme. Many have income limits for subscribers. But in other respects their organisation is similar to that of the Birmingham Scheme.

Among other schemes not affiliated to the British Hospitals Contributory Schemes Association, one of the most important is the London, Midland & Scottish Railway Hospital Fund. It is a very wealthy and very useful organisation. There are 218,000 persons contributing to it by allowing deductions of 3d. per week from their pay, while the Company adds another 1d. per week. A further 15,000 retired employees of the Company and widows of employees remain members on paying 1d. per annum. The income from contributions alone in 1936 was £185,243. Generally, the fund pays a voluntary hospital 42s. per week for an in-patient and 1s. per out-patient attendance. The public hospitals receive 17s. per week for adult patients and 8s. 6d. per week for children. But, besides hospital treatment, members receive allowances for dental treatment, massage treatment and other services and grants are made to district nursing associations. The fund also grants ½d. per week per member to the Railway Convalescent Homes, of which there are eight in different parts of the country, and which members may use without payment.

The Voluntary Hospitals Commission thought that the organisation of contributory schemes needed improving in several respects. Like the B.M.A., they thought that the benefits of the schemes should be confined to wage-earners and others within a certain income limit. Thus, the highest income limit should be £300 per annum (or £6 per week) for a married couple with a child or children under 16 years of age. Employers should be encouraged to contribute to the schemes. Schemes should cover regional areas, and only in exceptional cases should a scheme pay for the treatment of a member outside its area. Nevertheless, reciprocity of rights should be secured to any contributor who transfers to another area, either permanently or temporarily. Ultimately, contributory schemes should cover the whole country. The work of the British Hospitals Contributory Schemes Association should be encouraged and facilitated. Measures should be taken to see that no fraudulent collections are made.

Contributory schemes have many of the advantages and disadvantages of voluntary arrangements generally. Their enterprise and initiative are undoubted, and the way they evoke unpaid public service deserves unstinted praise. But with increasing size, a powerful bureaucracy sometimes emerges, and its sense of responsibility to its constituents is likely to diminish as they increase in numbers, and take less interest in the administration of a scheme. Moreover, the very speed with which voluntary bodies of this kind grow enables anomalies to creep into their administration and organisation. We shall have more to say on this general problem in Chapter XVI. We also point out in Chapter XVI the need for considering the question whether schemes for financing health services by contributory means should not be linked to the National Health Insurance system. At the same time we point out that the growth of these and other insurance schemes by instituting a regular drain on the weekly income of those in the lowest income groups may lower their standard of life, and that their value can only be assessed when this indirect effect of their work is taken into account.

Patients

The voluntary general hospitals were founded by persons who considered that they should be open to all the "sick poor." The ideal still inspires the voluntary hospitals, but there are many limitations to it. In some places the old patronage system survives of allotting so many letters of introduction to each subscriber of a given amount. Generally, one in-patient letter is worth several out-patient letters. But, even where the system exists, it does not affect materially the discretion of the staff. Moreover, the growth of hospital contributory schemes is helping to destroy it. Members of these schemes receive their hospital treatment free, but they have no absolute right of entry to a hospital. Nowadays, unless a patient is a member of one of these schemes, the almoner will ask him to contribute towards his maintenance and treatment, either in the out-patient department or in the wards. Admission to the general wards is usually not allowed to a single person with an income of more than £4 a week; a married couple with an income of more than £5 a week, and a couple with children under 16 with an income of more than £6 a week.

A patient is generally first seen by the hospital staff in the out-patient or casualty department. The casualty department is almost always open and a member of the junior staff is there to give emergency treatment. Sometimes, however, the casualty department becomes the place to which all minor cases are sent. Sometimes it is used as a place to sift the out-patients into serious and trivial, suitable and unsuitable, cases. Then only the serious cases are given advice and treated in the out-patient department by the "honoraries." The out-patient department is often open at fixed times for each type of case, and here the "honoraries" act as consultants. In this department patients get advice from the best consultants in the country, and treatment with the most up-to-date apparatus. (See p. 240.)

Members of contributory schemes are encouraged to bring doctors' letters, for these bodies do not want to see the out-patient departments of the hospitals which they support crowded with patients who could be treated elsewhere. The British Medical Association would like to see hospitals compel their clients to produce doctors' letters, unless they are emergency cases or discharged patients receiving treatment. This, of course, would conflict with the ancient principle which, particularly in London, dies hard, of open access to all the "sick poor." The Report of the Committee set up by King Edward's Hospital

Fund for London on Out-patient Methods, therefore recommended nothing more drastic than that the movement towards the more consultative use of out-patients departments, except for emergencies, should be encouraged. Patients who desired a second opinion should continue to have access without doctors' letters. In this way the right of the patient to seek a second opinion without asking and gaining the consent of his general practitioner could be preserved. But if this happens the hospital should undoubtedly refer the patient back to his general practitioner if it is a case for him. The Voluntary Hospitals Commission, however, considered that the policy of the British Medical Association was, in its broad outline, correct, and that out-patient departments should be confined to a limited class of patient. In fact, despite the provisions that limit the manner in which patients can approach out-patient departments, many people in large towns go to that of the nearest general hospital without ever going near their general practitioner.

There is evidence that sometimes the provision of waiting-room accommodation in the voluntary hospitals is very inadequate and that crowded waiting rooms spread infection, besides being obnoxious to those who use them. Sometimes, also, the treatment of some patients is perfunctory and even inconsiderate. This is partly due to the overcrowding of the departments and the difficulty, therefore, of distinguishing the patient who needs really skilled treatment and care. It prevents much attention being paid to the individual convenience of patients. Overcrowding also leads to patients being compelled to wait for long periods in out-patient departments. These factors strengthen the case for allowing only patients who desire a second opinion to come to out-patient departments.

Sometimes an "honorary" has a clinic in the out-patient department, and from these he sends patients to his beds in the wards. Sometimes, as in London, admission to the wards is arranged informally between the "honoraries" in the out-patient department, who have little to do with the wards, and the "honoraries" in the wards. The system still leaves some discretion to the patient and to his doctor as to the choice of consultant. In practice, the patient, after visiting the out-patient department, is under the instructions of a "resident" or "sister-in-charge" about the arrangements for actual vacancies. Nowadays, many patients are sent on to the public hospitals. In London this occurs with most fracture cases. Sometimes one criterion of choice of patients at the teaching hospitals is their value as clinical material. This, of course, affords the difficult and, therefore, the most interesting cases the very best treatment.

One of the most serious gaps in the organisation of voluntary hospitals at the present time is their failure to develop adequate follow-up arrangements. The almoners are mainly concerned with raising money from patients, and apart from the contacts created by professional friendship and interests, which may be very strong, there is no provision for liaison between the hospitals, the general practitioner of the district and the other agencies which may be able to assist a patient to regain his health once he has left the hospital.

In our discussion of the relationship between patients and the public hospitals we mention some of the advantages which patients in public hospitals are said to enjoy. It is at least necessary to point out here that a patient in a voluntary hospital cannot secure, apart from action in a court of law which is hardly suitable in most cases, any consideration of a complaint he may wish to make against his treatment from any body or person divorced from the hospital itself. His appeal in fact lies to the governing body, who naturally have to rely largely on the advice of their medical staff. In the case of a public hospital, it lies to the local authority which is not concerned in quite the same way with the day-to-day administration of the hospital, and the elected members of which are there to act as guardians of their constituents' rights. Sometimes these elected members may use their privilege for political ends and favour undeserving cases. In very many cases the governing body of a voluntary hospital treats complaints with the greatest consideration. The criticism, however, that their attitude in cases of this kind is sometimes inconsiderate is not entirely unjustified. Moreover, feelings are sometimes embittered by the failure of the voluntary hospitals to explain their actions when challenged, except on the general grounds that they are doing a great philanthropic work and that mistakes inevitably occur. This may be due to the fact that the administrative and medical staff is often very hard worked, but it may lead to unfortunate misunderstandings and the suspicion that the voluntary hospitals are too high-handed with the public.

Paying Patients

To cope with the growing number of middle-class people who cannot afford to go to a private nursing home and pay the full fees of a specialist, most voluntary hospitals have made some provision for "private" or "paying" patients. There are more and more cases, also, which can only be treated in hospitals, since only the very large nursing homes have adequate equipment. Wards and blocks are set apart for their use. Fees range from 4 or 5 guineas up to 10 or 12 guineas, according to the means of the patients. The specialists have no fixed scale of charges, but the patients make their own arrangements with them. At some hospitals the paying patient may consult specialists not on the staff of that particular hospital. At St. Thomas's, in London, for example*, there are 40 beds set aside for these patients, and at Guy's, 71. In the provinces, similar arrangements are made. There are, for example, 75 "pay beds" in the Bristol Royal Infirmary. At Manchester, in the grounds of the Royal Infirmary, a private patients' home with 100 beds has just been completed. Medical fees are to be charged according to the ability of patients to pay, and accommodation is to cost 4 to 10 guineas a week. These schemes are of great value to the community, and are an admirable addition to the work of the voluntary hospitals. The Voluntary Hospitals Commission went so far as to say that it regarded it as the duty of the hospitals to provide beds for paying patients. The Voluntary Hospitals (Paying Patients) Act 1936 empowers the Charity Commissioners to authorise the provision of such beds in hospitals where the terms of the trust have hitherto prevented them.

There are a few schemes for providing insurance for hospital treatment for middle-class patients, but very many more are needed. Nineteen of these are attached to particular hospitals, 16 provide their members with treatment in a number of hospitals and nursing homes.* The Norfolk and Norwich Hospital has a well-organised scheme in the first category. Under it no one with an income of over £300 per annum may be admitted to the general wards. But persons having less than £350, £450 and £550 per annum, according to whether they are single, married, or married with children under 16, on paying 30s. per annum are entitled to hospital treatment, including the services of surgeons and physicians and some kinds of out-patient treatment. In Liverpool and its neighbourhood the Hospital Services Association of Merseyside has secured facilities for its members in hospitals and nursing homes in Liverpool, Birkenhead and other places. In London and elsewhere the British Provident Association does similar work. Sometimes these schemes are linked to the contributory schemes. The Hospital Savings Association has a scheme, not included in those referred to above, whereby "honorary contributors" who pay £1 a year and have an income below £400 are relieved of payment if they or their dependants are treated in the ordinary wards of some hospitals. Other honorary contributors can recover 10s. a day up to £10 for treatment in a hospital.

---

* Hospitals Year Book 1937.

Staff

Medical Staff

A great part of the medical work in the voluntary hospitals is done without payment by the "honorary staff." This work is not done entirely for philanthropic reasons. For an appointment as an "honorary" at a big hospital brings prestige to the recipient in his private practice. Moreover, an "honorary" in a teaching hospital gains a reputation with students in his wards, and he hopes that when they become general practitioners they will send patients to him. The Liverpool Hospitals Commission* put the position concisely when it said: "Appointment as an 'honorary' is the recognised hall-mark of the consultant. Without it, an address and a brass plate in Rodney Street will bring no patients."

The internal organisation of the staff of a general hospital varies. Generally the beds are allocated to the "honoraries." These have in the out-patient departments what are known by a misnomer as "clinics." To these "clinics" general practitioners send cases, and the "honorary" determines whether or not they shall be admitted to the beds under his control. The "honorary" is often assisted in his work by a number of subordinates, including an assistant honorary, a house physician or surgeon, a registrar, and, perhaps, a quota of students. Together, these constitute what is known as a "firm." These arrangements differ according to the size, nature and tradition of the hospital concerned. Generally, a hospital has several medical and surgical "firms" or units of this kind. The special departments, such as the eye, orthopædic, ear, nose and throat departments, are usually similarly organised.

Some junior posts, such as that of house surgeon, physician and registrar, carry with them board residence and a small stipend. Others have no salary attached to them. But these posts are essential to anyone who wishes to become a consultant. Consequently this system tends to restrict the most profitable and distinguished positions in the medical profession to men with means.

Since voluntary hospitals are now drawing their patients from the income groups which did not formerly make use of them, the British Medical Association are pressing for the payment of consultants. In their evidence to the Voluntary Hospitals Commission they stated: "The majority of persons obtaining treatment are those who can pay, desire to pay and do, in fact, pay, directly or indirectly, towards their maintenance and treatment. Although the medical profession will gladly give, as always, its services gratuitously to those who cannot afford to pay for them, it is inequitable to require it to give its services without remuneration in voluntary hospitals which treat persons able to pay, and which in practice collect payments from a large number of their patients. The field of private practice has inevitably contracted, with the result that consultants, and particularly the younger consultants, are finding it increasingly difficult to secure and maintain a standard of living which represents a reasonable reward for their services, and enables them to maintain the highest possible standard of professional efficiency."

---

* The Liverpool Hospitals Commission was appointed in December, 1933, by the Liverpool General Hospitals Co-ordination Committee and the Medical Charities Committee of the Council of Social Service partly as a result of the survey of the Liverpool voluntary hospitals made by Dr. T. S. MacIntosh of the Ministry of Health. It published its Report on the Voluntary Hospitals of Liverpool in January, 1935.

The Commission considered that the claim of the medical profession was just, but pointed out correctly that the honorary staff reaped considerable indirect advantages from their position. This was particularly true, they considered, of the medical staff of a hospital to which a medical school was attached. Where the medical staff is paid at the moment it is on the basis of an assignment to staff funds of a fixed proportion of payments to the hospital. But the Commission considered that ultimately a definite part-time honorarium or salary would be the most satisfactory payment to the medical staff. They recognised that if this were paid a more definite statement of the duties undertaken by the staff than was at present considered necessary would have to be drawn up. In this connection also they considered that appointments should be for a short period of years, although they should be renewable, and that retirement should take place at sixty.

From the above account it is apparent that the staffing arrangements at the voluntary hospitals are bound up with the organisation of the medical profession. The best men are drawn into the service of the voluntary hospitals because through it lies the road to Harley Street, Rodney Street, or wherever consultants live, whereas the public hospitals, while they offer their junior staff a fixed salary, can only offer one or two senior posts (whole-time) worth about £1,500 per year in each hospital. Moreover, the work is often less interesting. A public hospital rarely gives a young man the opportunity of acquiring experience under the guidance of a leading consultant and in discussion of cases with men in similar positions to his own. Thus it does not open the way to advancement. Consequently, the public hospital has not been able to attract men who can earn up to six or seven times as much in private practice combined with an appointment at a voluntary hospital. We shall refer to this problem again later on page 248, and show that in various ways it is tending to change: for example, when voluntary and public hospitals work in collaboration and when public hospitals employ part-time consultants.

Nursing Staff

The nursing service is discussed in this Report in Chapter VI, and its special relation to the hospitals considered there.

The Almoner Service

The women almoners, whom many hospitals now appoint, act as a link between the hospitals and their patients. They are responsible for seeing that only patients within the proper income limits enter the hospitals, they facilitate the working of the contributory scheme if there is one, and they assess the contributions of patients. This work may fall to an inquiry officer. But the almoner is also responsible for arranging for convalescence and other "follow-up" services, like arranging for the supply of surgical instruments, special diets and other necessaries. Sometimes the almoner has to induce patients to come to hospital. Often this entails the thankless task of interfering in the home life of the patient with advice and suggestions. This contact enables the almoner to give the doctors an account of the patient's home circumstances and history. The almoner in a voluntary hospital should act as a liaison officer between the hospital and the public authorities in tuberculosis and maternity cases, and between the hospital and the school authorities and the Public Assistance authorities.

There is an Institute of Hospital Almoners which encourages university-trained women to join the service, and only awards its certificate, which is evidence of considerable training and experience, after a stringent inquiry into the candidate's powers of dealing with people and into her intellectual qualifications. There are now 50 almoners and assistant almoners in public hospitals, and 194 in voluntary hospitals, who hold the Institute of Almoners' Certificate. Of these 194, 102 are in London hospitals. There are also considerable numbers of other almoners who have trained in their own hospitals or who have been appointed as a result of their experience in social work.

Administrative Services

The chief administrative officer of a large hospital holds a very responsible post, since under the direction of the Board of Management he is in full administrative control, and responsible for the ordinary administration, for finance, and for the collection of funds. Sometimes responsibility for these functions is divided between separate officers; there may, for example, be a medical superintendent and a lay secretary; collection of funds may be wholly or partly under a separate organisation. The Commission on the Voluntary Hospitals noticed that when subordinates are promoted to the post of chief officer they are sometimes inclined to continue administrative methods learnt in the narrow environment of a single hospital. They urged that consideration should be given to the proposal to set up an Institute of Hospital Administration and also that pupil administrators should be trained in hospitals recognised for the purpose. The administrative staff in the smaller hospitals does not always include a person experienced in accountancy, in which case, the Commission suggested, a qualified accountant should be employed. The Commission also thought that the collection of funds should be divorced from administration.

The administrative staffs of voluntary hospitals are organised in the Incorporated Association of Hospital Officers. This body employs a whole-time director of education in hospital administration; organises the study and interchange of ideas on hospital administration, and publishes a monthly journal.

Auxiliary Services

The Voluntary Hospitals Commission pointed out the necessity that all persons employed in the various auxiliary services within the control of a hospital should be properly qualified. For example, they found that a person not possessing the statutory qualifications might be virtually in charge of a hospital pharmaceutical department. When statutory qualifications are not enforced, use, the Commission thought, should be made of qualifications and tests imposed by any recognised body.

The Problem of the Special Hospitals

In Great Britain 233 of the 1,013 voluntary hospitals in 1935 were special hospitals. They contained 19,032 beds (including those in auxiliaries) out of a total of 82,741. Many of them are comparatively small units. There are only 67 with over 100 beds and many contain less than 50. These hospitals are devoted either to one particular class of case or to one particular class of person. Thus there are hospitals for children, for women, and even for the clergy and for gentlewomen. More frequently the hospitals are devoted to a particular disease or diseases. There are hospitals for ear, nose and throat diseases, for diseases of the nervous system, and maternity hospitals.

Thus, in Liverpool, there is a children's hospital with three different branches, and in London six special hospitals for women in the central London area in close proximity to the large general hospitals. Amalgamation has, however, taken place in some areas. In London, for example, the Royal Northern has absorbed the Royal Chest, and University College Hospital, the Royal Ear and the Royal Dental. It uses the Royal Ear as an ear, nose and throat department. Concentration of all cases in a general hospital facilitates consultation between doctors, the better use of equipment and the economic management associated with a large unit. It eliminates the inconvenience to the patient entailed in travelling from one hospital to another.

Special hospitals are also often difficult to staff both with doctors and nurses, and they complicate the problem of training of doctors and particularly of nurses by dispersing clinical material. They are often uneconomic to run. Moreover, with modern conditions of transport the concentration of patients in a general hospital is both possible and easy.

The Report of the Voluntary Hospitals Commission deprecated the further establishment of special hospitals, since these were likely to entail rigidity of accommodation and so to increase the number of empty beds. "Disabilities," they said, "cannot be cut up into watertight compartments, and patients should have the benefit of consultation and co-operation between various members of the hospital staff in their treatment." Where they exist at the moment and it is uneconomic to get rid of them, they should be brought into close co-operation with the existing general hospitals or run as one of their departments. Nevertheless, special hospitals are sometimes necessary. Thus the orthopædic hospitals must be in the country and have provision for the education of children. In special hospitals there is also frequently a group of specialists whose intercourse establishes a higher standard of work than is provided in the isolated department of a general hospital staffed by one specialist. In London, at least, some of the special hospitals maintain a standard which the great general hospitals may well envy. The case for or against the special hospitals can only be considered in relation to the area which it serves and to the work it is in fact performing. Broadly speaking, the case against the special hospital is "not proven."

The Problem of the size of General Hospitals, particularly in relation to Teaching

Enough has been said to illustrate how haphazardly the voluntary hospitals were founded. At first the founders built hospitals for all the "sick poor," and then for the treatment of those suffering from diseases which particularly horrified them. Nowadays a general hospital is expected to deal with "any case any day." Few of them, in fact, can do it. But to turn away patients means, at least for a voluntary hospital, a loss of public favour. The British Medical Association envisage "base hospitals" of the future excluding only infectious disease cases. The Voluntary Hospitals Commission enlarged on this. One of the chief functions of the regional councils, the Commission recommended, would be the grading of hospitals into central, district and cottage hospitals. Central hospitals would have the maximum provision for the investigation and treatment of all patients. They would be entirely staffed by consultants, and would obviously be situated in or near a large town. District hospitals would have provision for dealing with all the ordinary illnesses. They would, however, be wholly or partly staffed by general practitioners. Situated near medium-sized towns they would have not less than 100 beds. Cottage hospitals would only make partial provision for patients and would be staffed by the local general practitioners. Almost the primary duty of the regional office would be the distribution of patients. As has already been seen the Voluntary Hospitals Commission advocated the partial merging of specialist hospitals with general hospitals. Further, they considered that as far as possible auxiliary hospitals, in which generalisation they included convalescent homes, should be utilised more fully than at present to relieve the pressure on the general hospitals.

Undoubtedly for administrative purposes a large unit is more suitable. Moreover, unco-ordinated specialism by hospitals creates some danger of incorrect diagnosis, or faulty treatment, quite apart from the inconvenient moves from hospital to hospital to which the patient is often subjected. In evidence before the Liverpool Hospital Commission, some experts put the optimum size of "a general unit or base" hospital as high as 1,000 beds and none put it lower than 500. Yet in London there are only six voluntary hospitals with over 500 beds out of the 17 general voluntary hospitals with more than 200 beds. Only two London hospitals and one elsewhere in England and Wales have more than 700 beds. In Scotland the Glasgow Royal Infirmary has nearly 800 beds, and the Edinburgh Royal Infirmary just over 1,000.

Obviously it is absolutely necessary for a medical school to have a large general hospital available for providing it with clinical material. The Liverpool Voluntary Hospitals Commission's Report asserted that for the annual intake of 85 students the medical school needed 500 beds for teaching purposes. Moreover, "private" or "pay" beds were useless since they cannot be used for teaching purposes. Liverpool is badly off for the Royal Infirmary near the university has only 328 beds, and the other general hospitals are one to two miles away. The new combined university and hospital buildings in Birmingham's suburbs will serve excellently. The Royal Infirmary in Edinburgh, with its 1,000 beds and large special departments, helps to give Edinburgh University its great reputation in the medical profession.

Moreover, the nursing profession must also be satisfied that adequate experience can be gained by those wishing to qualify in any hospital. A hospital taking trainees for complete training must satisfy the General Nursing Council that it can provide experience in medical, surgical and gynæcological cases, and in children's diseases. It must also have at least one resident medical officer, a staff capable of giving lectures to the trainees and equipment for the purpose of teaching. If a hospital which wishes to be recognised as a training school for nurses has inadequate clinical material, it may enter into an arrangement with other hospitals for a scheme of association or affiliation, subject to the approval of the General Nursing Council. Schemes of association may be made between a hospital which is deficient in clinical material in some branch, and another hospital or hospitals which can supply training in the branch in which it is deficient; while schemes of affiliation may be made between a smaller general hospital or a special hospital and a large general hospital. These arrangements are also referred to in Chapter VI.

Co-ordination of the Voluntary Hospitals

The voluntary hospitals have taken some measures to enable them to collaborate both on a regional and on a national basis. Some examples of hospital collaboration on a regional basis have been described. In Birmingham the two large general voluntary hospitals, the General Hospital and the Queen's Hospital have joined together to form the Birmingham United Hospital. The two hospitals are administered by the same board of management but they each have their own house committee. The board is also building a new general hospital outside Birmingham, close to the new university buildings. Schemes for amalgamation are also being prepared in Plymouth, Bristol, Liverpool and Swindon. We have already shown how co-ordination between some general and special hospitals has been secured.

In 1921 the first Voluntary Hospitals Commission was set up to distribute £500,000 voted by Parliament to the voluntary hospitals. To help it in its work it called into being voluntary hospital committees, generally on a county basis. These committees have been revived in a modified form as voluntary hospital committees under the Local Government Acts of 1929. By these Acts the local authorities are to consult with a committee representing the voluntaries on questions of hospital accommodation. In 1934 there were 31 of these committees in the counties of England and Wales, and 52 in the county boroughs, or 83 out of a possible 146.

In London King Edward's Hospital Fund for London acts as a central collecting agency for legacies and contributions to hospitals, besides possessing capital which brings in an income of nearly £200,000. It distributed in 1936 £302,000 to 145 hospitals within 11 miles of St. Paul's and to a number of convalescent homes. Since its distribution to each hospital constitutes in many cases about 10 per cent of their income, it can and does exercise considerable influence over their policy, particularly in regard to extensions and in seeing that they maintain certain standards of efficiency. It publishes valuable statistical data concerning the hospitals which make returns to it. It conducts *ad hoc* inquiries into questions concerning the London hospitals. There is also in London the London Hospitals Street Collection Central Committee and an active Voluntary Hospitals Committee for the County of London, which serves also as the London Regional Committee of the British Hospitals Association.

In Scotland there are five regional committees. The Scottish committees have not in the past been very active, but there is evidence that the Report of the Committee on Scottish Health Services has created a more lively interest in the regional idea among the voluntary hospitals, especially in the West of Scotland.

The British Hospitals Association represents nearly all the voluntary hospitals in Great Britain and some of those in Ireland. Great Britain is divided into 23 regions, one of which covers the whole of Scotland. Each region is covered by a regional committee consisting of representatives of all the voluntary hospitals which are members of the Association in the area. Eighteen of these regional committees are active and five more or less inactive. The Association is governed by a council consisting of regional representative, which meets four times a year. It has also whole-time executive officers and an executive committee which holds monthly meetings. Its purpose is to work out the fundamentals of voluntary hospitals' policy, to assist them by encouraging the exchange of information on administrative affairs and to discuss the problems of mutual interest to the hospitals. It does this through its annual conference and other activities, and by its support of the Bureau of Hospital Information. It has also established a committee to watch over and to promote parliamentary legislation. In 1935, at its annual conference, the Voluntary Hospitals Commission was set up under the chairmanship of Lord Sankey to examine the position of the voluntary hospitals, and to make recommendations as to their future organisation. This Commission reported in April 1937. The Commission itself drew attention to the extremely small budget of the Association, approximately £2,000 per annum, and to its lack of authority, which seriously impaired its effectiveness.

Other nation-wide bodies which help to co-ordinate the voluntary hospitals are the Incorporated Association of Hospital Officers and the Joint Council of the Order of St. John of Jerusalem and the British Red Cross Society. All these bodies collaborate for some of their important work. They maintain the Central Bureau of Hospital Information, which publishes annually the invaluable Hospitals Year Book. Most of the voluntary hospitals supply the Bureau with information about their income and expenditure. These returns are analysed and valuable statistical tables published in the Year Book, which also contains brochures on matters of interest in hospital administration from "milk supplies" to "Organisation and Staff of a Typical Voluntary Hospital." Similar brochures are published separately by the Bureau. The Bureau also answers inquiries on matters of interest to hospitals, particularly about materials, for it is in touch with the producers and users of hospital equipment. It encourages a few hospitals to make experiments with any material or equipment, and then reports on the results to other inquirers. It does not divulge the names of the institutions carrying out the experiments or reporting on the results of the use of any material, and so protects them from possible actions for libel. The Bureau also aims at securing the standardisation of hospital equipment and enabling hospitals to effect joint purchases. Thus it is able to prevent considerable waste.

Proposed Scheme of Co-operation

The Voluntary Hospitals Commission urged the division of the country into hospital regions based on those of the British Hospitals Association. It recommended that at first both provisional regional councils and a provisional central council should be set up.

The provisional central council would secure that no overlapping and no gaps should occur in the regional areas. Eventually the regional councils would have a permanent regional office which would be responsible for the distribution of patients, the keeping of patients' records, and the arrangement for the transport of patients to and from hospitals. It would also maintain a list of blood donors and inform prospective patients of the cost of ambulance services, treatment and other facilities. The organisation of joint purchasing schemes and advice on new buildings and enlargements would be among its duties. The co-ordination of appeals and contributory schemes would be an important part of its work.

The regional council would be responsible for the regional office. It would grade the hospitals in its area into central, district and cottage hospitals. Extensions would be regulated as far as possible. Ultimately it might create a regional fund comparable to the King Edward's Hospital Fund for London. The Voluntary Hospitals Commission also advocated the setting up of a central council with a permanent central office. This office would concern itself with the relations between the voluntary hospitals and the other health services and the co-ordination of the work of the regional councils and offices. It would secure, the Commission hoped, a uniform system of accounts throughout the voluntary hospital system. A Press Bureau, they thought, should be organised in it to enable the voluntary hospitals to keep in touch with public opinion. It was announced on October 15, 1937 that the British Hospitals Association had begun to implement the Commission's recommendations by setting up a Provisional Central Council.

The relations between the voluntary hospitals and the public hospitals will be discussed when an account of the public hospitals has been given. These proposals and others concerning the interlocking of the voluntary and public hospitals will also be considered critically in the light of the necessity to secure a close collaboration between these two types of hospital.

Peculiarities of the Voluntary System—its justification?

Enough has been said to show that the public hospitals have begun since 1930 to offer a service which is comparable to that given by the voluntary hospitals. These hospitals could, in fact, be described as offering a challenge to the "voluntary" system. In Chapter XVI of this Report we discuss more fully the definition of the term "voluntary service," and try to arrive at some general conclusions as to its place in the Health Services. Here we have described some of the features of the voluntary hospital system, and we intend in this section to consider what a number of commissions and committees which have upheld the voluntary system find of value in it. The discussion will help to elucidate some of its peculiar features and enable us to point out some of its merits and deficiencies.

All the reports emphasise the value of voluntary service, both medical and non-medical. The voluntary system is deeply ingrained in English tradition and it commands a great deal of voluntary effort from that of doctors to that of business men. The Cave Committees' Report stressed the value of the non-medical service the system received. They mentioned that they had obtained evidence that in France no one was interested in the communal hospitals, or thought of visiting them, even in war time. In this country, as the Report said, besides the governing committees there are ladies' committees, visiting committees, linen guilds and other organisations all interested in providing the essentials and amenities of a hospital. There is, however, evidence that this kind of service will probably grow up in connection with public hospitals. Voluntary work is often done in connection with other public medical services. Thus the after-care work for mental hospitals is sometimes carried out by voluntary associations, and for the school medical services by unpaid after-care committees.

Under the system whereby the general practitioner sends his patient to the honorary of his choice, the specialist is still the choice of the patient's general practitioner, who knows his family history. This point, and the fact that the specialist only attains prominence through the support of those he serves, was mentioned with approval by the Liverpool Voluntary Hospitals Commission. However, with the growing flexibility of the public hospital service and the appointment of part-time consultants to some public hospitals, these features may well find their way into the public hospital system.

The voluntary Hospitals Commission, 1935, which devoted little space to an examination of the merits of the voluntary hospital system, stated that: "medical education flourishes best in the atmosphere of freedom inherent in the voluntary hospitals." It is held also that the teaching hospitals, as part of the higher educational system of the country, should, like the universities, remain autonomous. This contention was stressed in the Reports both of the Cave Committee and of the Liverpool Voluntary Hospitals Commission. Further, the Liverpool Commission stated that they considered that the best research work could only be carried on in the free atmosphere of a voluntary hospital. Again, there is no reason to suppose that this atmosphere need be peculiar to a voluntary hospital. In fact, it exists at the Hammersmith Post-Graduate Medical School, which is an integral part of an L.C.C. hospital, and is the product of the co-operation of the L.C.C., the University of London, and the Ministry of Health. Moreover, this free atmosphere might well be endangered in a voluntary hospital if one of its wealthy patrons chose to interfere in the hospital's work.

Another feature of the voluntary hospital system noticed by the Voluntary Hospitals (Local Government Bill) Committee of King Edward's Hospital Fund for London, was that the voluntary hospitals were in no way hampered by local government boundaries, and could take their patients from almost anywhere. This, of course, is particularly valuable for the patients, who can secure the best possible treatment, and for the teaching hospitals which can get the best clinical material. Administrative arrangements could, of course, enable public hospitals to do the same.

As we have shown, most of these advantages of the voluntary hospitals could be reproduced in public hospitals. But what the British Medical Association Committee on Hospital Policy and the Liverpool Commission regarded as the essence of the system, namely, the independent management, could not be reproduced at any rate in a "municipalised" system. The existing system also enables bold experiments to be made, particularly in the smaller voluntary hospitals; whereas untried policies in any public system might tend to be suspect. The Voluntary Hospitals Commission expressed this point rather differently when they said: "the freedom of administration which the voluntary system permits is also of fundamental importance." Further, the Liverpool Commission stated in their Report that they would deprecate the introduction of questions of "policy" in the political sense into the hospital questions. This, they pointed out, was inevitable when hospitals were under a committee of a local authority which quite rightly had to relate its policy to that of a council which was concerned with numerous matters. They also stated that in their opinion the method of appointment to posts in "municipal" hospitals is not so good as that in the voluntary hospitals. For in the voluntary hospitals appointment to posts is often virtually by the medical committee who are in daily contact with the work required. Nominally it rests in Liverpool with the committee of management sitting with others elected annually for the purpose of forming an appointments committee. The Liverpool Commission considered, however, that the system in voluntary hospitals in Liverpool was clumsy, and recommended that ability would be better detected by an appointments committee of the Voluntary Hospitals Committee for Liverpool responsible for appointments in all the voluntary hospitals in Liverpool. Similarly, the Voluntary Hospitals Commission deprecated appointment by mass meeting. But the Liverpool Commission considered even the existing system preferable to that of the method of appointment in the municipal hospitals. Appointment to municipal hospital posts is made by a sub-committee of the hospitals committee, or whatever committee is responsible for hospital administration, advised by the medical officer of health. But their choice has to be confirmed by the city or other council. Despite the outstanding abilities of most medical officers of health in large centres, they cannot be in close touch with the work of their hospitals. Nor does the sub-committee of the council always take the advice of the medical officer of health, for matters of policy occasionally intervene. This, it was thought, might become extremely undesirable.

It is hardly necessary to mention that, as the Cave Committee pointed out, enormous expense would be incurred by whatever public body took over the hospitals.

We have already pointed out in various parts of this chapter some of the deficiencies and disadvantages of the "voluntary system," such as the possibility of an aggrieved patient finding difficulty in obtaining redress. We have shown that sometimes the voluntary hospitals have not sufficient funds and find themselves with large deficits. All voluntary hospitals have to waste much time and energy on "raising the wind" in nation-wide appeals. The necessity to advertise themselves affects both their organisation and their relationship with the public. It makes them unduly sensitive to criticism. It is probably partly responsible for their remarkable individualism and inability to co-operate, which has only recently been modified. This, of course, is also due to the natural and legitimate pride of the supporters of a local hospital who resent outside interference. But this isolationism often leads to administrative overlapping and waste. Another feature which affects their location is the convenience of the honorary staff. For example, in London the desire of the honorary staff to be conveniently near Harley Street has probably helped to prevent some of the voluntary hospitals, which have been rebuilding, from moving to more healthy surroundings than central London affords. Before, however, we can carry this discussion further we must examine the public hospitals.

PUBLIC HOSPITALS

The public hospitals have become a vital and integral part of the hospital system of Great Britain. Most of them were built in the nineteenth century either as poor law hospitals or institutions, or as infectious diseases hospitals. Many are still under the control of the public assistance authorities. Others have been "appropriated" and have become public general hospitals. The public hospitals provide nearly three-quarters of the total available hospital beds, but they do not do so much out-patient work as the voluntary hospitals. They provide nearly all the available beds for infectious diseases, and most of those for tuberculosis and maternity cases. Chronic cases are almost all dealt with in public hospitals. Local authorities provide in addition public dispensaries and special clinics. Some of these do work similar to that done by the out-patient departments of voluntary hospitals.

Authorities

Since 1875, local sanitary authorities in England and Wales have had power to provide general hospitals for the sick, but only in three cases before 1930 did authorities exercise this power. It is now possessed by county councils, county borough councils, municipal borough councils, urban district councils and rural district councils. These may also contribute up to the equivalent 1⅓d. rate to voluntary hospitals and institutions. Only authorities which are maternity and child welfare authorities may, however, maintain maternity homes.

The Boards of Guardians were compelled to make provision for the destitute sick either in general hospitals (poor law hospitals) or other institutions. In fact, by 1930, when the Boards of Guardians were abolished, many of the poor law institutions or hospitals were being used by the public as hospitals for the general sick, although every patient remained technically a pauper. This development was due to the lack of other hospital accommodation and the demand of the public for increased hospital facilities. The Guardians also provided beds for patients in general mixed workhouses. Under the Local Governments Act, 1929, their powers and duties were transferred to the Public Assistance Committees of the county councils and county borough councils. By the same Act the county councils and county borough councils were given the power to "appropriate" former poor law hospitals and transform them into public hospitals or, alternatively, to build general public hospitals. In England 37 county borough councils, eight county councils, and the L.C.C. had "appropriated" 92 institutions with 50,073 beds by the end of 1936. In some cases in Wales local authorities are arranging to build hospitals to supplement the existing provision.

In the case of infectious diseases hospitals (including hospitals for smallpox) in administrative counties responsibility is divided. The duty was placed upon each county council by Section 63 of the Local Government Act, 1929, of preparing in consultation with the councils of all county districts, and if necessary with the council of any county borough adjoining the county, a scheme for the provision of adequate hospital accommodation for the treatment of infectious diseases within the county. The scheme may have to be put into effect by the smaller authorities. The majority of the county councils have now complied with the Section, and their schemes have been submitted to the Minister of Health and approved by him with or without modifications. The Section is re-enacted by Section 185 of the Public Health Act 1936, and if in any instance a county scheme has not been prepared prior to October 1, 1937, it must be prepared and submitted in pursuance of the later Act. The council of any district affected has the right of making representations to the Minister concerning the provisions of the scheme, and such representations are considered carefully by him before his approval of the scheme is given. The county borough councils cannot, of course, be compelled by the county councils to do anything, since they are autonomous.

The Ministry of Health only exercises indirect control over hospital policy such as that in connection with infectious disease hospitals. The Ministry's sanction is required with few exceptions for all loans raised by local authorities including, of course, those for the extension of hospitals. Plans of any proposed hospitals or of any extension are also submitted to the Ministry.

Under the Local Government Act (Scotland) 1929, the county councils and the town councils of the larger burghs can submit schemes to the Department of Health for the reorganisation or extension of all the hospital facilities at their disposal, in order to provide general and other hospital accommodation. The Department, before it approves of any extension, must inquire into the extent of the hospital accommodation in the area, including that provided by the voluntary hospitals. As we explain in Chapter XIV, certain voluntary hospitals receive direct grants from the Department out of the Highland and Islands Medical Services Fund. The result of the Local Government Act, 1929, has also been to transfer from numerous smaller authorities to the county councils and councils of the larger burghs the power to build and run poor law hospitals, general public hospitals and infectious diseases hospitals.

Government

Owing to the different paces at which the reform in local government in England and Wales inaugurated in 1929 has proceeded, hospitals are still controlled differently in different parts of the country. If the local authority has exercised its powers of appropriation under the Local Government Act, 1929, the public general or appropriated hospitals and the infectious diseases hospitals are usually governed by the Health Committee of the council concerned. Sometimes there is a special Hospitals Committee. More frequently the Public Assistance Committee governs the public assistance (poor law) institutions, and the Health Committee the infectious diseases and other special hospitals. This is nearly always the case in the counties, where the district council may also be partly responsible for the control of some of these hospitals. Co-ordination of policy is, therefore, only secured by the administrative action of the medical officer of health. For purposes of their work these committees divide into subcommittees and the subcommittees may, and do, co-opt persons other than members of the council to assist them. Thus each hospital generally has a subcommittee to look after its affairs, and this subcommittee may include a number of co-opted members. Thus, theoretically at least, a democratically elected body supervises the day to day administration of the hospital. The medical officer of health is the senior permanent medical official. Under him are the medical or lay superintendents of the hospitals as his administrative subordinates. But the superintendents are also directly responsible to the subcommittees concerned with their hospital. Similar arrangements to these exist in Scotland.

Finance

The bulk of the expenditure of public hospitals is met out of local rates and out of the "block grant." A local authority in England and Wales is compelled by statute to recover from in-patients in all hospitals, except infectious diseases hospitals, the cost, or a proportion of the cost, of their maintenance. The assessment of out-patients and patients in infectious diseases hospitals is permissible but not compulsory. If, however, patients are members of a hospital contributory scheme which has an arrangement with the local authority they are excused payment. Sometimes these schemes pay the local authority a lump sum, and sometimes they pay them a *per capita* sum. Thus the Hospital Saving Association pay the L.C.C. 15s. per week for the first six weeks a member is confined in a council hospital, and 10s. per week for the remaining four weeks during which they accept liability. The Hospital Saving Association accept no liability for tuberculosis cases, infectious or contagious diseases cases, maternity or infant welfare cases. In Scotland local authorities may, but are not required to, recover the cost of maintenance in a hospital from the patient. In regard to out-patient treatment the situation is different, for no local authorities in Great Britain can sue a patient for the cost of out-patient treatment as they can for maintenance. Nevertheless, some, such as the L.C.C., charge for out-patient treatment. Thus the Hospital Saving Association pays the L.C.C. 4s. per patient. Despite these arrangements the proportion of patients' payments is extremely low. The local authorities also receive from the central government certain small specific grants in respect of their hospitals.

Type of Hospital	Total Expenditure	Patients' Payments		Central Government Grants‡
	£000	£000	Per cent of total Expenditure	£000
England and Wales 1934-5				
General	4,971	470	9.5	1.1
Tuberculosis . . .	3,827	114	3.0	0.2
Venereal diseases . .	440	3	0.7	—
Infectious diseases .	3,852	194	5.0	0.7
Poor Law Hospitals .	2,381	554* (estimated)		—
Poor Law Infirmary and sick wards . . .	4,152 (estimated)			—
Scotland 1933-4				
General† . . .	699	31	4.4	—
Tuberculosis . . .	653	19	2.9	—
Venereal diseases . .	86	—	—	

---

* The total sum recovered in respect of persons receiving institutional relief is divided in the proportion of sick in Poor Law institutions, or hospitals and in infirmaries, or sick wards of general institutions to the total number of persons in receipt of institutional relief.

† Includes cost of relief to sick persons formerly relieved under the Poor Law Acts now chargeable to Public Health under schemes approved under Section 27 of the Local Government (Scotland) Act, 1929.

‡ Other than the block grant, which covers an allowance for hospitals among other local government responsibilities.

Medical Staff

The problem of staffing public hospitals is yet unsolved. Generally there is a considerable resident staff, and the service is yearly attracting better men who are tempted by the prospect of a permanent salary. Sometimes a hospital is under the control of a medical superintendent who is responsible for its whole administration. He generally receives a salary of about £1,500 per annum. The L.C.C. employ part-time consultants on a sessional basis while the whole-time doctors are responsible for the patients. These consultants are paid by the number of sessions they attend at the hospital. Their fees range from £125 for one session per week per annum to £500 per annum for six sessions a week. For these fees they carry out the work of a consultant and perform any operations which are required. In other cases part-time consultants are responsible for the patients in particular beds under the general supervision of the medical superintendent. In this case a resident staff does the work of the house surgeons and physicians of a voluntary hospital. In other cases, again, a whole-time medical staff of all ranks is employed.

Doctors in public employment claim that there are many advantages in the method of staffing a public hospital as compared with that employed in a voluntary hospital. The staff is more closely integrated under the leadership of the medical superintendent or his equivalent. Instead of a number of specialists, one doctor is generally responsible for the patient throughout his illness, although he utilises the specialist services. But other authorities have claimed that there are distinct advantages in the system instituted at voluntary hospitals.

Patients

Already the public hospitals have almost a monopoly of the treatment of infectious diseases, and they do a great deal of the maternity work. Similarly, "chronic" patients fall largely into the hands of the public hospitals. Provision for these patients accounts in part for the high proportion of the total number of hospital beds in the country in public hospitals. In Scotland the public hospitals, outside the four large cities, still concentrate on those types of cases. In parts of England, particularly in the country areas, few "acute" cases go to the public hospitals. But in the large towns, the public hospitals are often as well equipped as the voluntary hospitals to deal with them. Although local authorities in England and Wales had, until lately, no specific power to provide out-patient treatment, the out-patient departments in the public hospitals have been steadily developing over the last 10 years under the impetus of public demand. Thus, in Liverpool, the out-patient attendances at the Smithdown Road Hospital increased from 9,352 in 1932 to 32,731 in 1936. The Public Health Act, 1936, has now regularised the position in England and Wales and local authorities are given specific power to make this provision, although in London and Scotland the position remains the same, since no specific power is given in any Scottish Act or under the Public Health (London) Act 1936.

The public hospitals must always take all patients coming to them. In London, at least, the voluntary hospitals often send on cases to the public hospitals after they have been a day or so in the wards. Patients in the public general hospitals and the poor law hospitals pay according to their means, unless they are members of a hospitals contributory scheme, which has an arrangement with the public hospitals to take its members.

It is claimed that patients are not "patronised" to the same extent that they are in the voluntary hospitals. They can also expect redress for any grievances by appealing to the local authority. They are said, also, to have more freedom in the public hospitals, and to be treated less as "cases" and more as human beings.

The Problem of Special Hospitals

We have already pointed to the need for the close co-operation between the special and general hospitals of the voluntary system. This is no less true of the public system. There are, for example, 578 infectious diseases hospitals in England alone (details are given on page 257). Many of these are very small hospitals built by the old sanitary authorities, and are now redundant.

The Committee on the Scottish Health Services emphasised the changing conception of the role of infectious disease hospitals from places of isolation to specialised institutions for the treatment of complications such as pneumonia. They also stated that many of the hospitals were built on faulty principles. The wards were large, whereas they should be small for the treatment of a large variety of diseases and for the observation and treatment of complicated conditions. This work should certainly be done in a centralised institution, and could well be done in a pavilion attached to a large general hospital. For only a centralised institution can possess the expert staff and expensive equipment. We show how this centralisation is being carried out in Aberdeen and its neighbourhood (on page 256), and in Norfolk (on page 262), under the impetus of the legislation passed in 1929.

Most tuberculosis hospitals must continue to be situated away from general hospitals owing to the necessity for keeping the patients in particularly healthy areas. But they should work in the closest collaboration with the neighbouring general hospital. Maternity homes could generally be amalgamated in a general hospital and those for emergency cases would be better situated in the closest proximity to a big general hospital. Some hospital authorities controlling a number of public general hospitals may find it convenient to use some of their hospitals mainly for special types of cases. If they do this, however, it can be assumed that they generally do it because they have not rebuilt their hospitals and are utilising old poor law hospitals. The practice should certainly in most cases be only a temporary measure. As we show below it is vitally necessary to plan hospitals on a regional basis irrespective of their control, and the need for this is well illustrated in the case of the problem of special hospitals belonging to a local authority in an area where there is no public general hospital, and co-operation with a voluntary general hospital is necessary.

Administrative Problems of Public Hospitals

The administrative problems of the public hospitals in Great Britain are partly the legacy of the old Poor Law, and partly the problems of local government in general. Often the hospital buildings or the buildings adapted for hospital use are old. In London, for example, the L.C.C., although they have vastly improved their hospitals, have not as yet carried out any extensive rebuilding. Sometimes it is difficult to separate the part of the building which becomes a hospital from the poor law institution. The old poor law hospitals seldom had any real out-patients' departments, and these have had to be built or improvised.

The Guardians left unsolved the problem of the most suitable place to house the "chronic." In London a solution has now been reached but elsewhere these cases may be found in hospitals for "acute cases" or in workhouses. In London the "chronic" patient is put in hospitals administered by the Hospitals and Medical Services Committee, while the "infirm" patient, who may need a few days in bed now and again, and help with his or her toilet, but not professional nursing, is left under the care of the Public Assistance Committee. Some of the more populous counties are making arrangements for classifications of this kind, but in most districts, particularly in Scotland and Wales, the premises available are too limited.

In country districts few appropriated hospitals exist. By March 31, 1937, only 10 county councils in England and Wales, including the L.C.C., had "appropriated" hospitals for general hospital purposes. However, the richer county councils are showing increased signs of interest in the provision of hospital accommodation, and some county councils, such as Surrey, Staffordshire and Essex, have planned a comprehensive hospital service which entails the building of new hospitals. In Scotland only one county has made use of its powers to draw up a scheme for the reorganisation of the hospital facilities in its area. Therefore, in county areas most of the public hospitals are still administered under the poor law.

Sometimes, as in Liverpool, local government boundaries bar persons living in dormitory areas from the public hospitals of the towns, of which they are really citizens. Residents, for example, in the new housing estate at Huyton, near Liverpool, are excluded from the Liverpool hospitals. But residents in the old union area, the West Derby Union, which includes Bootle and part of the county of Lancashire, have access to the Liverpool public hospitals. This is because the union built three of what are now the general public hospitals of Liverpool.

The problem of areas and the stigma of the Poor Law have hampered the development of hospitals in Scotland under schemes under Section 27 of the Local Government (Scotland) Act, 1929. For the local government authorities, in order to avoid being swamped by an influx of persons needing hospital treatment, insisted that Section 27 should enable them to inquire into a person's settlement. This, of course, entails a Poor Law procedure as regards patients not belonging to the area possessing the hospital, and makes the hospitals unpopular. The Report of the Committee on the Scottish Health Services, therefore, suggested that the hospitals should be organised on a regional basis partly in order to overcome this difficulty.

Co-operation of local authorities for the sharing of hospital provision sometimes takes place. In Yorkshire, for example, in the Leeds public hospitals arrangements are made for putting a definite number of beds at the disposal of other local authorities for maternity cases in return for the payment of costs. In England and Wales there are 97 joint hospital boards on which are represented county and municipal borough councils, urban and rural district councils, or some of these types of local authority, which have combined to provide hospital accommodation for infectious diseases.

As early as 1925 the county and city councils of Aberdeen began working out a co-operative scheme of public health administration. Now this scheme extends to Kincardineshire. The chief regional medical officer is responsible for all medical services and even the veterinary service. There is a public hospital in Aberdeen taking patients from the three areas. Redundant infectious diseases hospitals have been closed down in Aberdeenshire. Two city tuberculosis institutions have modern radiological plants which the counties could not have afforded. The maternity and child welfare services and the school medical services are brought within this scheme. The public health committees of the three authorities retain responsibility, and there is no attempt to pool the costs of the scheme, which are borne by each authority under an arrangement which has never caused friction. But there is a liaison committee working in close contact with the chief regional medical officer. The essential linch-pin of the scheme is the agreement on the part of the local authorities to appoint a chief regional medical officer. This scheme does not attempt to compete with the voluntary hospitals. The public hospital takes patients from the waiting list of the Aberdeen Royal Infirmary. There is, in fact, a clearing-house for cases, which are allotted to the various hospitals according to needs. The professors in medical science at the university are consultants at the public hospitals which are, therefore, teaching centres. The county authorities also have arrangements with the cottage hospitals in return for a small retainer and 25s. per week per patient. There is a joint committee representing the North-Eastern Voluntary Hospitals Regional Committee and the local authorities which facilitates the co-operation of the voluntary hospitals and the public hospitals. Thus the regional system enables the voluntary hospitals and the public hospitals to collaborate. The City of Aberdeen gains by the full use of its facilities and the counties get services they could not otherwise afford.

Co-operation between the hospitals of different authorities, the voluntary hospitals and the other medical services has been secured in Gloucestershire, and will be referred to in Chapter XIV.

NATIONAL HOSPITAL PROBLEMS

The Adequacy of Hospital Accommodation

Co-operation is made particularly urgent by the long waiting lists of the larger hospitals, which cause misery and worry to many persons waiting for operations or other treatment. Yet, if these waiting lists are analysed it is found that they exaggerate the need. The names of many persons are those who do not need or require admission even if they once did. Moreover, whenever there is a critical emergency case a bed is always found. Nevertheless, there is a genuine shortage of hospital beds in Great Britain, and occasionally this shortage is very serious.

The following tables give some indication of the number of hospital beds in Great Britain and the various authorities controlling them.

Hospital Provision, England and Wales, 1936

(Voluntary Hospital figures relate to 1935)

	Institutions	Beds	New In-Patients during year
Voluntary Hospitals, all types:			
Making Returns . .	849	71,064	1,101,061
Not Making Returns . .	44	1,688	
Public Hospitals:			
General	111	55,988	751,277
Poor Law Hospitals and Sick Wards	466	73,905	
Institutions Provided by Local Authorities exclusively for:			
Tuberculosis . . .	191	16,997	...
Maternity	96	1,703	30,660
Smallpox	310	6,899	...
Other Infectious Diseases .	621	32,575	...

Hospital Provision, Scotland, 1936

(Voluntary Hospital figures relate to 1935)

	Institutions	Beds	New In-Patients during year
Voluntary Hospitals, all types:			
Making Returns	111	9,833	169,104
Not Making Returns . . .	9	156	...
Public Hospitals:			
General	5	1,460	10,800
Poor Law Hospitals and Sick Wards	57	6,000	40,000
Institutions Provided by Local Authorities exclusively for:			
Tuberculosis	31	5,000	7,764
Maternity	16	360	...
Infectious Diseases	124	7,200	41,833

In 1933 the Ministry of Health made inquiries to discover the number of hospital beds available in four large cities in Great Britain. The figures in the following table, which sets out their findings, do not represent the total number of beds in the hospitals in these towns, since in both voluntary and municipal hospitals a certain number of beds are allocated to patients from outside the municipal boundaries. In some cities, also, the city council has an agreement with local authorities in the neighbourhood to take certain cases. Consequently, the table is based on a number of estimates taking these factors into account.

City Population at Census, 1931	Glasgow 1,088,461	Birmingham 1,002,603	Liverpool 855,539	Manchester 766,333
Total Municipal Beds	6,083	4,408	6,138	4,967
Total "Public" Beds in Voluntary Hospitals	1,835	1,307	1,217	1,064
Total Beds, Municipal and "Public" Voluntary	7,918	5,715	7,355	6,032
Municipal Beds per 1,000 population .	5.59	4.39	7.17	6.48
"Public" Voluntary Beds per 1,000 population	1.69	1.30	1.42	1.39
Total Beds per 1,000 population . .	7.28	5.70	8.59	7.87

But the following table shows the actual number of beds existing:

City Population at 1931 Census	Glasgow 1,088,461	Birmingham 1,002,603	Liverpool 855,539	Manchester 766,333
I. Municipal Beds:				
1. Maternity	111	132	309	227
2. Infectious Diseases (including Smallpox)	1,554	632	1,037	545
3. Pulmonary Tuberculosis . .	767	527	828	659
4. Acute Medical and Surgical (not included in 1, 2 and 3), chronic sick and bedridden infirm . .	3,567	3,229	4,333	3,373
TOTAL	5,999	4,454	6,598	4,909
II. Voluntary Hospital Beds:				
1. Maternity	191	90	117	105
2. Other Conditions	2,673	1,763	1,878	1,749
TOTAL	2,864	1,853	1,995	1,854
Private Beds included in total Voluntary Hospital Beds*	112	110	170	80
"Public" Beds included in total Voluntary Hospital Beds†	2,752	1,743	1,825	1,774
TOTAL Municipal and "Public" Voluntary Beds	8,751	6,197	8,423	6,683
Total Municipal Beds per 1,000 population	5.51	4.44	7.71	6.41
Total "Public" Voluntary Beds per 1,000 population	2.53	1.74	2.13	2.31
Total Municipal and "Public" Voluntary Beds per 1,000 population . . .	8.04	6.18	9.84	8.72

* i.e. beds reserved for or commonly occupied by patients who are charged at a definite rate which covers the cost of maintenance or at least a very substantial part of it, as distinguished from patients to whom no definite charge is made, although they may be asked to contribute according to their means.

† i.e. all beds other than "private beds."

N.B.—The number of beds in the "public" and "private" categories may vary slightly from time to time as a few are used at one time for "private" and at another for "public" patients.

Thus it can be seen that the provision of hospital beds varies considerably in different areas. Further, where there may be a shortage of beds for one type of case, such as infectious disease cases, there may not be for others. Frequently the cottage hospitals are empty, while the large general hospitals have long waiting lists.

A glaring example of the inadequacy of hospital organisation and equipment in Great Britain, both public and voluntary, was brought to light by the British Medical Association's Committee on Fractures. There are some notable exceptions, such as the fracture clinics in some of the London County Council hospitals, at Ancoats Hospital, Manchester, and at the Royal Infirmary, Liverpool. The result of this inadequacy is illustrated by the fact that incapacity remained permanently in only 1 per cent of patients in a consecutive series of cases treated at organised clinics, whereas 37 per cent of another series, including a proportion who had been treated at general hospitals without an organised clinic, remained permanently incapacitated.

Proportionately lengthy periods of disability were also sustained by those who did not attend clinics compared with those who did. For example, an examination of the records of 50,000 consecutive accident cases shows that the average disability period for Colles's fractures was 14.3 weeks; for fractures involving the ankle joint, 37.6 weeks. Some of these cases may have been treated in clinics. The records of two organised clinics treating 452 cases for Colles's fracture showed a disability period of 7 weeks, and fracture of the ankle 11 weeks over an average of 183 cases. The above figures, which illustrate the magnitude of the problem, are borne out by the figures given in the Interim Report of the Inter-Departmental Committee on the Rehabilitation of Persons Injured by Accidents, 1937. This Committee estimated that well over 200,000 fracture cases were treated annually in the hospitals of Great Britain, but only about 50,000 of these were treated in fracture clinics. This Committee, like the British Medical Association's Committee, urged the creation of fracture clinics in connection with the existing hospitals in every large centre of population. For rural areas an efficient ambulance service to cope with cases, particularly where there is a high incidence of road accidents, is essential. The Committee outlined a scheme for the organisation of a fracture clinic in a hospital. The British Medical Association Committee tentatively suggested that rehabilitation centres where light work, gymnastics and other occupations could be undertaken, should be established in industrial areas. This would include provision for resident and non-resident cases. The Inter-Departmental Committee have not yet dealt with this problem in a published report. (See Chapter III.)

Co-operation Between Voluntary Hospitals and Public Hospitals

To secure the best possible utilisation of all hospital beds, many voluntary hospitals and local authorities have been drawn into collaboration with one another. The local authorities have discovered that some of their services, such as their venereal diseases services, and some of their cases, such as dental and ophthalmic cases, may be better and more cheaply handled by the voluntary hospitals. In return for this work the voluntary hospitals receive grants towards both their capital and current expenditure. Some also benefit from the power which local authorities in England and Wales have of making an unconditional grant of up to 1$\frac{1}{3}$d. rate. In return for these grants they have sometimes given the local authorities the right to appoint representatives to their Boards of Management, and at the same time the process of broadening voluntary hospital support has been carried even further with the creation of contributory schemes, representatives of which also take their place on the Boards. Thus the demand of the inhabitants for an efficient and co-ordinated hospital service, irrespective of local professional rivalry and prestige, has had an opportunity to express itself, and has been met in many cases. The power of the purse strings, combined with a demand for as little taxation as possible, has, as always, exerted its influence on the direction of progress and on the nature of the constitutions evolved.

Other examples of the collaboration of the local authorities and the voluntary hospitals include the permission to use public hospitals for teaching purposes, particularly in London, and the transfer of fracture cases from the voluntary to the public hospitals in London. Another method of securing collaboration between the voluntary and public hospitals is for the medical officer of health to be appointed to the honorary staff of the voluntary hospital. In Sheffield there is a Radium Centre, supported jointly by the voluntary hospitals and the Corporation, and a joint transfer scheme to relieve waiting lists.

The work of co-operation in Aberdeen and its neighbourhood has already been mentioned, and that in the Highlands and Islands is described in detail in Chapter XIV. In Cambridgeshire a division of function between the voluntary and the public hospitals was arranged in 1931, and has worked satisfactorily. Under it the public hospitals admit all "chronic" cases, "infirm" nursing, and simple maternity cases, minor surgical cases and even acute medical cases which do not require specialist treatment. The voluntary hospitals admit all major surgical, acute medical and complicated maternity cases. An arrangement of this kind is comparatively easy in Scotland and in rural areas in England and Wales, where the provision of public hospitals and the demand for them has never been large. Similar co-operation between the public authorities and the cottage and general hospitals in Gloucestershire has been secured, and will be discussed with the rest of the experiment in that county in Chapter XIV. The Cumberland Infirmary, the voluntary hospital in Carlisle, is also being used as a "base" hospital by both the Cumberland County Council and the Carlisle County Borough Council.

The work of the voluntary hospital committees under Section 13* of the Local Government Act 1929 and the work of the regional committees in Scotland have been mentioned. Some examples of their co-operation with the public authorities have been given. In some areas, however, this type of organisation has been further developed, and joint committees consisting of the representatives of the voluntary hospitals, the local authorities and other bodies, have been formed. Thus, in Manchester there is the Joint Hospitals Advisory Board. This includes ten representatives of the public health committee and the medical officer of health, ten representatives of the voluntary hospitals committee and five representatives of the University. It has power to advise the different responsible authorities on new hospital accommodation, on the staffing of the hospitals, on medical education and on medical research, but it has no executive powers or functions. The Oxford and District Joint Hospitals' Board has an even more diverse personnel, including representatives of four specified voluntary hospitals and any others which may become associated with it, five local authorities, the representatives of contributory schemes, of the University and of the local branch of the British Medical Association. There is also a smaller executive council. This body more nearly corresponds to the Regional Councils proposed by the Voluntary Hospitals Commission than some other examples. Moreover, it is to have a stated policy, executive powers and a staff. It is laid down in its constitution that any hospital or other body which joins the Board must accept the "general policy of the Board." The Board is to carry out the usual functions of regional bodies, such as co-ordinating the hospital services in its area. Further, it is to set up a "Special Appeals and Voluntary Subscriptions Department" for the collection and allocation of funds. This department is also to be responsible for organising hospital and health services propaganda in collaboration with the other bodies interested. There are about 16 of these committees in existence in England, with varying powers and functions.

---

* Re-enacted in the Public Health Act, 1936.

The Geographical Distribution of Voluntary and Public Hospitals

Three maps (which can be opened out to be examined alongside this page) are inserted in Appendix II to show the hospitals in the administrative county of London, and in the administrative county of Norfolk and the county boroughs of Norwich and Great Yarmouth, in relation to their geographical situations and to the needs of the areas they serve.

The London maps show how the voluntary hospitals are concentrated in the central areas, and the London County Council hospitals in the outlying areas. This is partly because the London County Council hospitals have been developed to serve areas which had not been urbanised when many of the voluntary hospitals were founded. The voluntary hospitals provide specialists' services for the whole of the London County area and Greater London. Many patients also come to them from all parts of the country. In 1931, according to the Joint Survey of Medical and Surgical Services in the County of London, 37 per cent of their patients came from beyond the county boundary.

The concentration of the voluntary hospitals is due to a number of causes. Perhaps one of the most important is that many of them were founded to serve a London which did not stretch beyond Westminster or Regent's Park. This has given them, also, administrative, sentimental and traditional attachments to a particular area which makes it difficult for them to move without sacrificing the goodwill of the public upon which they depend for their funds. In the days of horse-drawn vehicles it was also necessary for them to be near the specialists and consultants whose practices were in London and whose homes were in the comparatively healthy suburb of St. Marylebone. Consequently, the hospitals tended to grow up in the neighbourhood of Harley Street. Again, this attachment to Harley Street has remained. For doctors are still unwilling to travel long distances to their patients. The desire of the medical schools to be near the university centres has also probably helped to restrain the hospitals from moving.

This concentration of the voluntary hospitals can hardly, under modern conditions, be the best arrangement. Patients are subjected to the endless noise and hubbub of the centre of London and the fog which pollutes the atmosphere. Nevertheless, the Middlesex, which has just been rebuilt, did not move, and Westminster and St. George's are being rebuilt in the central area. Yet a number of other institutions, such as the Royal Earlswood Institution for Mental Defectives, the Foundling Hospital, several well-known schools, and an East End hospital for children, have found it expedient to move out into the country.

The map of Norfolk shows how, by reason of its position and size, Norwich is the natural hospital centre of the county, and it has a fully-equipped voluntary general hospital. There are voluntary general hospitals at King's Lynn and Great Yarmouth, but the honorary staff at these hospitals are, with very few exceptions, general practitioners, and difficult cases are sent on to Norwich. The cottage hospitals are generally situated in the small market towns and are staffed by the general practitioners. There is, unfortunately, no agreement between these hospitals and the larger hospitals for the distribution of patients. Some element of co-ordination is, however, secured by the reciprocal agreements between contributory schemes.

The public hospitals do not compete with the voluntary hospitals since they are mainly concerned with maternity, tuberculosis and infectious diseases, while chronic cases are housed in Public Assistance Institutions. The county council has wisely chosen East Dereham for its new central hospital for infectious diseases.

This consideration of the relation of hospitals to the area they serve illustrates how impossible it is to consider the hospital problem in terms of either the public or voluntary hospitals in the district, how the needs of an area cannot be controlled by local government boundaries, and how it is necessary to plan hospital provision in relation to the modern conditions of transport. It also shows how essentially different the problem of co-ordination is in different areas. In London, for example, there is a highly-developed system of public hospitals; in Norfolk, this is, except for special purposes, practically non-existent.

Conclusions

Some indication has been given of how the problem of co-ordination and co-operation between various types of hospitals is being tackled. But pressure is still rightly being exerted for tightening the bonds which knit together the hospital system of the country. The Voluntary Hospitals Commission recommended that the voluntary hospitals should attempt to induce the local authorities to make them grants. But they thought that the claim which this contribution would give to local authorities to be represented on the Boards of Management should not be pressed unduly, although it should be recognised. The Committee on the Scottish Health Services recommended that a special grant should be made available by the State to assist the teaching hospitals, that all voluntary hospitals should be exempted from paying legacy and succession duties, and given remission from the payment of rates. State assistance is, however, not likely to be entirely divorced from State interference.

The Consultative Council on Medical Allied Services of the Department of Health for Scotland advocated, in their Report on the Hospital Services in 1933, that joint committees representing the voluntary and public hospitals should be set up by special legislation. For the Scottish regional areas the report of the Committee on the Scottish Health Services advocated the same policy. It went even further, and considered that the Department of Health should be enabled to veto, if it desired, any scheme of extension by the voluntary hospitals as well as by the local authorities. But the Voluntary Hospitals Commission thought that a policy of this sort would not be tolerated south of the Border. Certainly, in Scotland the chances of preventing overlapping are greater than they are in England, because the development of public hospitals has not gone very far, and there has always been a division of function between the two types of hospital, besides collaboration between the local authorities and the boards of the voluntary hospitals.

The Voluntary Hospitals Commission considered that the Regional Councils they proposed should include representatives of the local authorities, and also that the Ministry of Health and presumably the Department of Health for Scotland should be invited to appoint representatives to the Central Council.

It is obviously impossible to envisage the hospital problem in two distinct parts, the public and the voluntary system. The methods by which co-operation and co-ordination can be secured have been indicated. Representation on Voluntary Hospitals Boards of local authorities and the setting up of regional bodies containing representatives of all the interested parties seem obvious lines of advance. But the Central Council proposed by the Voluntary Hospitals Commission might tend to stereotype the voluntary system unless the Regional Councils were strong enough to resist it. Inevitably, an organisation of that kind would tend to hinder the ultimate merging of the two systems which may be desirable. For the same reason it would be undesirable to recreate the Voluntary Hospitals Commission or any other statutory commission empowered to inspect and assist the voluntary hospitals. Nevertheless, it would, perhaps, be desirable to secure the co-ordination of the teaching hospitals, and this might be done through the agency of the University Grants Committee or by some separate body.

The complete merging of the two systems, if it comes, will evidently not be completed for a very considerable time. Moreover, it should not be beyond the wit of man to devise some machinery to preserve the independence, originality and boldness in experiment of the teaching hospitals, while bringing them into a co-ordinated system.

It is very unlikely that there will be any alteration in the ultimate source of a large portion of the funds of voluntary hospitals, that is, working-class payments and the ratepayers' money. Therefore, the well-known constitutional principle which has already been mentioned, that those who pay ultimately demand control, will begin to take effect, for there is no reason to suppose that the voluntary hospitals in this country will escape from its operation. Moreover, to surrender control to a Regional Council is not the same thing for a voluntary hospital board as to hand over to the local authority. In the constitutions of the existing joint committees and boards very considerable representation is afforded to the medical profession, both in the employment of the local authorities and on the staff of the voluntary hospitals. Thus, machinery is provided in a regional council for evolutionary constitutional development.

At the same time, regional areas are obviously more suitable for hospital administration than the areas of existing local authorities. We have illustrated this by numerous examples, and it is only necessary to refer here to the case of Oxford, with the Radcliffe Infirmary serving at least three counties, Oxfordshire, Buckinghamshire and Berkshire, but giving place to other hospitals, such as the Royal Berkshire Hospital at Reading, in parts of these counties. Each area has its peculiar difficulties to solve. In some there is a high proportion of industrial accidents. In others, transport services are a primary problem. While the motor car has shortened distance and made regionalism possible it has not made it possible to place hospitals on a national basis. Therefore, each area must be fully equipped with apparatus and staff to deal with any case. Thus, within the regional areas the grading of all hospitals, whether they are voluntary or public, and the elimination of wasted bed space should take place. Regionalism will also facilitate the co-operation of the consultants' and specialists' services in the area, especially in their connection with the public hospitals. It will help forward the utilisation of special hospitals to the best advantage, or their elimination wherever that is desirable and can be easily effected. It will also enable the best use to be made of any redundant hospitals and cottage hospitals as convalescent homes. The provision of convalescent homes should also be brought within the scheme. We refer to this in greater detail on pages 266-269. It is out of place here to speculate on the possibility of hospital organisation and administration affording an interesting and instructive experiment in the possibility of regionalism and in a new type of constitutional development, but the point is worthy of consideration.

Co-ordination of hospital services in regional areas will undoubtedly take place in the near future. This co-ordination should include the public hospitals, for without them there will be friction, waste and inefficiency. Without surrendering control the local authorities can collaborate with the voluntary hospitals. At the same time, without losing many of their inestimable qualities, the voluntary hospitals will be able to function as part of a larger hospital system. Ultimate control will rest in the hands of those who use these services, of those who pay for them, and of those who provide them. Thus, in hospital organisation and administration the opinion of the medical profession will always be given due weight. To adjust the differences between these interested parties, all seeking the same objective, the most efficient hospital service will require foresight and tact, but there is no reason to suppose that these are lacking in the sphere of hospital organisation and administration.

Contributory schemes, which have become an important feature of hospital finance, are one of the factors making for regionalism. Obviously, they are providing a valuable source of income for the voluntary and even the public hospitals. But we propose to consider them in relation to the whole question of financing the health services by contributory methods in Chapter XVI.

We have emphasised here the need for the co-operation of administrative units. It is no less vital to secure the co-ordination and co-operation of the medical units in an area. Thus the closest collaboration is necessary between the various special hospitals, the infectious diseases hospitals, the maternity hospitals and the general hospitals. Collaboration between the hospital services and the general practitioner is no less important, and only if a real collaboration and co-ordination is secured can the hospital and the general practitioner services work to the best advantage. The British Medical Association stated in its 'Hospital Policy' that every effort should be made "to provide medical and nursing facilities in institutions where the family doctor may treat those of his own patients who need such provision and who can thus remain under his care." This, in fact, is often provided in cottage hospitals and small general hospitals, but it is undesirable that it should be extended too far, since if the patient is in need of institutional and, therefore, probably specialist treatment, he should be able to get the very best. But every facility should be given to practitioners who have specialised to obtain appointments on the staffs of either public or voluntary hospitals.

Institutional provision is a vital need in the health services, but it is essentially a curative service, and the need for it is evidence in a sense of the failure of other services. Some of the improvements in the health service we have suggested should, if they are successful, reduce the need for institutional provision. Above all, the strengthening of the position of the family physician will prevent much unnecessary resort to hospitals. At the same time the family physician should be given easy access to the services provided by the hospitals, for that will facilitate his work and make the work of the specialists in the hospitals more efficient.

AMBULANCE SERVICES

Ambulance services are an important adjunct to hospital work. Their organisation at the moment illustrates once more the need for co-operation between the voluntary hospitals, the local authorities and the other voluntary agencies concerned. As recently as 1934 the Annual Report of the Ministry of Health mentioned the practice existing in one area of removing the patient from one ambulance to another at the boundary of a particular local authority.

A large number of local authorities organise their own ambulance service. In London there are also the Metropolitan Police Ambulances. The L.C.C. maintains an efficient ambulance service. It is available free of charge within the County of London (except in the City) in cases of emergency, for infectious disease cases, through the public assistance department, or for one of the Council's hospitals. It can be used, according to a scale of charges, in other cases. In 1935 the General Section was responsible for carrying 190,837 patients, and 91,277 relatives and friends of patients, and staff, and in performance of these duties the ambulances covered 1,522,803 miles. The Accident Section dealt with over 47,500 calls and ran over 221,500 miles. Many other local authorities possess ambulance services including police ambulances. In Scotland, out of some 320 ambulances in 1936, 145 were owned by local authorities.

Sometimes voluntary hospitals have ambulances. In Scotland 9 are owned by the voluntary hospitals. Industrial undertakings sometimes own ambulances to deal with emergency cases. Under Regulations issued in 1930 the owner of every mine is responsible for seeing that there is an effective ambulance service available whenever it is necessary. The service must be so organised that a sufficient number of motor ambulances are kept at all times in constant readiness, with a driver readily available, at a base not more than 10 miles by road from the mine. These arrangements are generally made through the local authorities or through the ambulances maintained by the Miners' Welfare Fund, or one of the voluntary bodies. But occasionally colliery companies or groups of companies own their own ambulances. In Scotland 16 "works" (mainly collieries) own ambulances, according to the Department of Health Report for 1936. Hospital contributory schemes also sometimes provide ambulance services.

The Order of St. John of Jerusalem and the British Red Cross Society, through their county organisations, maintained in 1936 361 ambulances in England and Wales. The funds for support of these ambulances are raised voluntarily, mainly by the local organisations, although the Joint Council of the Order of St. John of Jerusalem and the British Red Cross Society make a grant towards the support of 141 of them. Those who use the ambulances are generally expected to make some payment. The ambulance work of the St. John's Ambulance Brigade is co-ordinated with their valuable first-aid work on the roads and on public occasions. In Scotland the St. Andrews Ambulance Association owns 57 ambulances.

It is unnecessary to stress the need for the co-ordination of all the ambulance services and their co-operation with all the agencies involved in treating the sick, particularly the hospitals. Co-operation is obviously especially necessary in emergency cases.

CONVALESCENT HOMES AND NURSING HOMES

Although logically both convalescent homes and nursing homes are part of the British hospital system, it is necessary to consider them separately owing, partly, to their anomalous position. Convalescent homes should be closely linked to general hospitals. In this way the use of general hospital beds by patients who are convalescing or who do not need specialised treatment can be avoided, while at the same time a general supervision can be maintained over the discharged patients. Yet convalescent homes are, except when they are under the control of voluntary hospitals or local authorities, generally divorced from the hospital system. Nursing homes are the outcome of social distinctions and are diminishing, because social distinction cannot compete with technical efficiency. The voluntary hospitals are providing better services in wards reserved for paying patients, in connection with which the facilities of the hospitals and the services of its doctors are available.

CONVALESCENT HOMES

Provision for convalescent care in Great Britain arose at the beginning of the last century as a result of the pressure for beds in hospitals. Private philanthropy was responsible for the first convalescent homes, but later "mutual assistance groups," such as trade unions and co-operative societies, began to make convalescent provision for their members. Since 1900 local authorities and employers in industry have added to this accommodation.

To-day, therefore, there are between four and five hundred convalescent homes in Great Britain, of which about 350 are run by private philanthropic effort, rather fewer than 50 by "mutual assistance" groups, 30 to 40 by local authorities, and about a dozen by individual industries. There are about 24,000 beds altogether in these homes—i.e. about 54 per hundred thousand of the population—and rather over 250,000 persons per annum make use of them.

Of the homes not run by local authorities about a third are governed in much the same way as an independent voluntary hospital; between 80 and 90 are run by voluntary hospitals for their own patients (these are rather small, very few containing more than 50 beds), while the remainder are run by employers, "charitable trusts" and various social agencies. Out of the homes run by the "mutual assistance" groups, the Hospital Saturday Fund is responsible for about 15, while "convalescent associations of workers" own about a dozen, friendly societies and co-operative societies rather less, and trade unions and working men's clubs a very small number. Homes run by local authorities are undoubtedly on the increase, and the comparatively small number of them gives little indication of their importance. Local authorities began to open them just before the War, and the 1929 Local Government Act greatly facilitated their work in this respect. For example, the L.C.C. in 1930 opened Queen Mary's Hospital, Sidcup, Kent, with accommodation for 500 male convalescents. Convalescent provision in 18 homes or institutions (included in the figures given above) in England and Wales is maintained by welfare authorities for expectant and nursing mothers and young children. In addition these authorities arranged in 1936 for the use or reservation of beds in 52 institutions maintained by voluntary associations. In Scotland local authorities run three homes for maternity and child welfare cases with accommodation for 60 mothers.

Types of Convalescent Care

The convalescent movement began by merely providing congenial surroundings where people could finally recuperate after an illness, but recently there has been a tendency to emphasise the therapeutic element in convalescent care and there has also been an attempt to meet the need of persons suffering from special diseases such as rheumatism. This need has been met either by limiting admission to some homes to persons suffering from certain diseases or by setting aside a ward or wing in a general institution for this purpose. Rheumatic heart disease has been specially provided for and there are also a considerable number of beds set aside for mental and neurotic cases as well as for orthopædic, blind, rheumatic and other cases needing convalescent care. There are also special convalescent homes for expectant and nursing mothers and children under five. These homes are really auxiliary hospitals and should be run in the very closest collaboration with general hospitals.

By far the largest number of homes, however, admit patients at the convalescent stage suffering from all kinds of ailments. A very small number provide special equipment, skilled nursing and medical attendance, but on the whole they have limited facilities which enable them to treat only minor ailments. All age groups appear to be catered for, either in separate homes or in separate wings of the same home. There is very little provision, however, for the adolescent boy, as very few homes for adult men will admit boys under fourteen, and more usually under sixteen, and institutions for children set the upper limit at ten years.

Financial Aspects of Convalescent Care

The sources from which convalescent homes are financed vary considerably and the same applies to the methods of fee charging adopted. In 1931 an elaborate survey on this subject was made by Miss Elizabeth Gardiner* and no later figures are available. There is an expenditure of rather over a million a year on convalescent care in Great Britain, and much of this is collected in small sums from a very wide public.

The amount asked in fees by homes varies from "what the patient can pay" to "what the management thinks it right to ask," and a variety of sliding scales are adopted by the different homes. The general conclusion, however, is that there is no relation between the charge made and the cost of the care given, and incapacity to pay is no reason for being refused admittance.

Bequests and the resulting endowments are largely responsible for financing the homes run by philanthropic effort, and the "subscriber's ticket or letter" plays an important part in financing about 30 per cent of these homes. Central funds such as the Hospital Saturday and Sunday Funds and Queen Alexandra's Rose Day Fund, also make lump sum grants to convalescent homes, and the Charity Organisation Society and many district nursing associations raise funds for providing board and lodging for their clients.

The exact contribution of industry to convalescent care is difficult to assess, for here again much is set down as patients' fees; but the 15 or 20 homes run by employers certainly do not represent industry's entire expenditure for this purpose.

Mutual assistance groups such as trade unions and friendly societies have arrangements whereby for a subscription of ½d. to 4d. a week convalescent care is provided. A number of approved societies include convalescent home treatment as an additional benefit, and in 1937 in Great Britain as a result of the Fourth Valuation, £216,878 was allocated to it, £21,911 was allocated to the maintenance of the premises of convalescent homes which approved societies are permitted to build and administer, and £432,020 to allowances to members during convalescence from some disease or disablement. According to returns made to the British Hospital Contributory Schemes Association in 1935, 3,976,000 persons, and in a large number of cases their dependants, were entitled to convalescent home treatment in virtue of their membership of hospital contributory schemes. The Hospital Savings Association, who provide this benefit, generally confine themselves to refunding to their members half of the cost of treatment and maintenance for four weeks.

Much money is annually contributed by public authorities, both local and central. A few homes for children receive both grants from the Board of Education and also payments of so much a head from the local education authorities. Public assistance committees sometimes contribute. The money from the central government takes the form of direct subsidies, from the Ministry of Pensions and other departments, for blind persons and other special groups, and indirect payments through the Exchequer contributions to National Health Insurance.

Conclusions

The extent of convalescent home provision in this country has been shown to be fairly considerable. There are about 54 convalescent beds per hundred thousand of the population. Perhaps a better way of estimating the extent of convalescent home provision is to say that there is one bed in convalescent homes to eight beds in all voluntary hospitals and in all public general and infectious diseases hospitals as set out on page 257. This number cannot, however, be considered adequate, and more of these homes are needed. With regard to special sections of the population, the adolescent boy is least adequately provided for, and provision for the middle-class also needs to be increased. As to the actual organisation of the homes, it appears that while some of them provide excellent nursing and medical care, this is not the case in a large number, especially of the older institutions. Skilled nursing should be provided in more homes, and more use might be made of the new therapies, such as occupational and recreational therapy. Further, many of the homes lack provision for the treatment of minor ailments, which should clearly always be available. As we have already said, they should be linked wherever possible to large general hospitals and in many cases they should become mere adjuncts of them. It also seems desirable that the head of a convalescent home should be a trained nurse, and such information as is available indicates that this is not always the case.

---

* Convalescent Care in Great Britain. (1935).

The desirability of forming some kind of central organisation to co-ordinate the work of and to raise the standards of administration in convalescent homes also needs to be considered. At present the work of these homes is completely unco-ordinated, with the result that patients are probably sent far longer distances than is necessary, and local authorities and other bodies are concerned entirely with providing for the needs of their area and their own people without considering the larger needs of the community. The British Hospitals Association has done much to encourage the exchange of information between hospitals and it seems reasonable that the convalescent homes should be brought into connection with it and also with the Regional Councils proposed by the Voluntary Hospitals Commission, when these are set up. Standardisation of equipment and the prevention of much waste might also result if an organisation similar to the Central Bureau of Hospital Information existed.

There is, further, the problem of the extension of convalescent provision to be considered. The extent of the shortage could best be ascertained by a central organisation, and the problem as to the lines of future development can only be satisfactorily decided by the pooling of information through some central body. It is most necessary, for example, to decide in which parts of the country and for which class of person convalescent homes are particularly needed, and if this information were obtained local authorities could try to meet the need for convalescent care where it is not provided by philanthropic effort.

NURSING HOMES

Nursing homes are places where patients are accommodated and treated for profit, so it is clear that unless they are controlled by some public body their existence may lead to considerable abuse. It was recognition of this fact that lead to the setting up of the Select Committee on Nursing Homes who made criticisms on grounds of structure, accommodation, staff and neglect of patients. Their evidence showed that the greater number of nursing homes were originally built as ordinary dwelling houses and are therefore quite unsuitable for their present purpose, and that in a certain class of smaller and cheaper home the accommodation both for patients and nurses was inadequate and insanitary. Further, they found that matrons were often completely unqualified and there were frequently no qualified nurses on the staff, which often resulted in the gross neglect of the patients.

The Nursing Homes Registration Act 1927, now re-enacted in the Public Health Act 1936 and the Public Health (London) Act 1936, attempted to remedy these defects in England and Wales. Provision is made for the registration of all nursing homes by the local authorities, which may refuse registration if certain conditions are not complied with. Any nursing home opened after the passing of the Act is only granted registration if a doctor or a fully qualified nurse is in charge.

The Act has undoubtedly done a certain amount to improve the conditions in nursing homes, but much depends on the local authority as to what sort of a standard is demanded. In many cases, it is true, registration is only granted when a high standard is reached but often most inadequate conditions are accepted, and it is not unknown for a hotel to be passed as suitable. That the possibility of evading inspection and registration still exists was shown by a murder trial in 1936, when the convicted woman was found to be an unqualified nurse in complete charge of an unregistered nursing home. The Ministry of Health is making every effort to encourage local authorities to see that all nursing homes in their areas are registered and inspected, and a recent circular of the Minister lays down the steps that should be taken to secure this.

The conditions under which nurses work in these homes should be much more rigidly inspected and a considerably higher standard demanded than at present, for qualified nurses are reluctant to take posts in the average nursing home under present conditions. It appears most desirable that only qualified nurses should be allowed to do the actual nursing in these homes, for they are not of course recognised as training places for probationers, and the untrained "nurse housemaid" who predominates on the staff of many homes is often allowed responsibility which may be very dangerous.

As to the future of nursing homes in Great Britain it seems both likely and desirable that the paying wards in hospitals will eventually replace them in providing for the needs of the middle class. Nursing homes can seldom afford the expensive apparatus that is demanded by modern medicine, and skilled nursing and first class medical attention capable of dealing with all emergencies is much more easily provided in a large hospital. A considerable time must elapse, however, before all the work now done in nursing homes is done in hospitals. There is also one need which nursing homes can best provide for, and that is the need of the chronic sick who are prepared to pay for their maintenance and nursing rather than go to a public institution. Accommodation of this kind is at present very inadequate, and nursing homes could most easily provide it. There might also be advantages in experimenting with the bringing of nursing homes into closer association with local hospitals, as satellite establishments for limited purposes where sufficient pay beds or pay blocks are not available.

IX. SPECIAL SERVICES

Provision for Persons Suffering from Mental Disorder and Mental Deficiency: Introduction—**Mental Disorders:** Certification and Treatment—Local Authorities—The State and Voluntary Bodies—Conclusion—Statistics—**Mental Deficiency:** Incidence of Mental Defect—The Wood Committee's Recommendations—**The Tuberculosis Service:** Introduction—Incidence and Mortality—Effects of Urbanisation—Tuberculosis Service—Improvements—**Venereal Diseases Services:** The Service—Incidence and Use of Centres—After Effects—Problems and Remedies—**Cancer and the Radium Services:** Mortality—Methods of Treatment—The National Radium Trust and the Radium Commission—The Work of the Centres—Facilities for the Prevention, Diagnosis and Treatment of Cancer—**Provision for the Care of Cripples:** Causes of Crippling—Incidence of Crippling—Local Authorities and Cripples—Voluntary Work—Administrative Arrangements—Conclusion—**The Welfare of the Blind:** Incidence and causes of Blindness—The State and Local Government Service—Education—Cost—Voluntary Work—**The Deaf and the Deaf and Dumb:** Incidence of Deafness—Statutory Provision—Voluntary Provision—Improvements.

In this chapter we consider the services organised for the benefit of persons suffering from types of disorder which must be dealt with by highly specialised medical and administrative machinery. Broadly speaking, these disabilities are of a longer duration than ordinary illnesses; often they are permanent or semi-permanent. Institutional accommodation of one kind or another is required for some persons in all these categories. Sometimes these institutions have to be in particular areas for climatic reasons, as in the case of tuberculosis sanatoria. Sometimes provision has to be made to enable the persons affected to make some contribution by their own efforts towards the cost of their maintenance by the community. These and other demands have led to the growth of complicated administrative machinery which we briefly describe in this chapter, while we refer even more briefly to the medical and medico-social problems involved. In each case we discuss the incidence of the disorder.

PROVISION FOR PERSONS SUFFERING FROM MENTAL DISORDER AND MENTAL DEFICIENCY

Introduction

Provision is made under statutory authority for the care and treatment of those suffering from mental disorder and for the care and provision of the mentally deficient.

Mental deficiency is regarded as a congenital condition and must have been present from birth or from an early age to enable the defective to be dealt with under the statutes. But mental disorder may be either inherited or acquired, and in either case onset may occur at any age. Mental deficiency is regarded as a fluctuating but incurable condition, but a high proportion of the cases of mental disorder respond to treatment and are regarded as curable. The two conditions have a meeting place both in family history and in practice, and transfers from one class to the other often occur. On the whole, however, the nature of these conditions is such that they must be regarded separately and each class is therefore provided for under different statutes. In England and Wales mental disorder is provided for under the Lunacy and Mental Treatment Acts, 1890-1930, and mental deficiency under the Mental Deficiency Acts, 1913 and 1927. These Acts include provisions enabling persons of means to be provided for in private institutions, or in private accommodation in public institutions. But the great majority are maintained out of public funds and are classed as rate-aided (see tables on pages 275-6 and 279). Criminal patients are dealt with as a separate class.

The service is in England and Wales under the general supervision of the Board of Control. The Board has powers to authorise the provision of mental hospitals, to continue to license institutions for persons of unsound mind which held licences at the passing of the Lunacy Act, 1890; to approve the institutions in which mental patients can be received under the Mental Treatment Act, 1930; and to approve and certify institutions for the reception of mentally deficient patients. The Board may make rules to carry out the provisions of the statutes, and excercises supervision through a staff of inspectors known as commissioners, who visit hospitals and institutions and report upon the conditions of such places and of the persons maintained therein. The Board also prescribes books and forms to be used in general administration as well as in establishments for mental patients. Similar functions in Scotland are performed by the General Board of Control, which is responsible to the Secretary of State for Scotland. From the earliest times the property of all persons suffering from mental disability has been protected by statute, and provisions to this end are included in the Acts relating to the treatment of mental patients of all classes in Great Britain.

MENTAL DISORDERS

Certification and Treatment

The arrangements to enable a private patient to be treated in a mental hospital or licensed house require that the nearest relative shall present a petition in a form prescribed in the Act of 1890 to a Judicial Authority. The petition must be accompanied by two medical certificates, one to be by the patient's usual medical adviser. The Judicial Authority may, on this petition, make an order for the reception (into an institution for persons of unsound mind) of the patient, who may be detained there in accordance with the provisions of the Act. Rate-aided patients—those who have not the means to enable them to secure treatment as private patients—are dealt with by the relieving officer. When a relieving officer has notice that a person within his district is alleged to be of unsound mind it is his duty to give notice to a Justice of the Peace, who in turn is required to visit the patient and consider as to his mental condition. For this purpose the Justice may appoint a medical practitioner to examine the patient and the report of this medical practitioner must be in the form prescribed in the Lunacy Act. If, upon the report of the medical practitioner, the Justice is satisfied that the person is a person of unsound mind, he may make an order for his admission to a mental hospital, where the patient must be detained in accordance with the provisions of the Lunacy Act. If, pending these proceedings, the relieving officer is satisfied that it is necessary for the safety of the public or the welfare of the patient that the patient should be removed to a place of safety, he may remove the patient to a Poor Law institution or to a public health hospital which has been designated under Section 18 of the Mental Treatment Act, 1930, for the reception and detention of persons alleged to be of unsound mind. In such a case the Justice would visit the patient at the institution or hospital to which he had been removed and the proceedings would be carried out there. In fact, the majority of the cases of persons alleged to be of unsound mind are classed as rate-aided persons and dealt with in this manner. In the case of a person found wandering who is alleged to be of unsound mind, any police constable or relieving officer may remove him to a place of safety, and may institute the proceedings set out above. Similar provisions are made in Scotland for the detention of persons of unsound mind.

But there are marked differences between the services provided in Scotland and those in England and Wales. From 1890 until 1930 the services in England and Wales were administered under the Lunacy Act 1890. This Act was supplemented in 1930 by the Mental Treatment Act, which provides for treatment without certification, but administration is still mainly under the Act of 1890. The words "lunatic" and "asylum" are now replaced by the words "mental patient" and "mental hospital." Thus some of the stigma of the old arrangements has disappeared and this has probably facilitated the early treatment of mental disorders. The Mental Treatment Act extends the reception of voluntary patients to include the "rate-aided" class and provides for a further non-certified class to be known as "temporary" patients. The latter are not voluntary patients, but patients for whom there is a prognosis of early recovery. For them facilities are provided for treatment without certification for a period of from one to six months, which may be extended to twelve. The new methods of dealing with the less severe mental disorders are described in Chapter XIII, in the section on Psychological Medicine and Mental Health. The new outlook engendered by the study of psychological medicine has had an effect on the old methods of treating mental disorder which, unlike mental deficiency, is regarded in many cases, but not in all, as a curable condition.

Local Authorities

In 1808 the Justices of the Peace were empowered to establish county lunatic asylums. Now the county councils and the county borough councils are responsible for providing sufficient mental hospital accommodation for "rate-aided" patients, and may make provision for paying patients. The cost of the maintenance and treatment of patients in mental hospitals, when borne by public funds, falls upon the Public Assistance Committee as a Poor Law charge. The county councils and the town councils of the larger burghs are the responsible authorities in Scotland.

Every county council and county borough council in England and Wales must have a mental hospitals committee. If the authority administers more than one mental hospital, it must appoint a sub-committee of the visiting committee for each hospital. Some authorities have exercised the power which they possess to combine to build mental hospitals, or authorities with existing mental hospitals have secured a special Act of Parliament to set up a joint board to administer them. The most notable examples of this are the Lancashire Mental Hospitals Board and the West Riding Mental Hospitals Board.

There were 101 county and county borough mental hospitals in England and Wales at the beginning of 1937, which provided accommodation in recognised bed space for 126,769 patients, but there were in these hospitals 2,982 patients in excess of this provision. Patients are also boarded out in local authorities' hospitals, and in Scotland some are sent to the Royal Asylums, which in certain cases also receive patients from those local authorities which have no asylums of their own. There are in Scotland 21 asylums built by the old lunacy district authorities and 15 lunatic wards in poorhouses, both of which are now in the hands of the county councils and the councils of the larger burghs. The number of mental patients is increasing, chiefly owing to the swelling of the age groups mainly affected, but steps are being taken to reduce the overcrowding in hospitals. During 1936 plans were approved for England and Wales which were expected to provide 1,454 additional beds.

In Scotland special permission has to be obtained from the General Board of Control to allow voluntary patients to enter "asylums." In England and Wales out-patient departments are run under the Mental Treatment Act in connection with many mental hospitals, and often in collaboration with, or as part of, the local general hospital. In Scotland there is comparatively little provision of this sort. Occupational therapy is now being used in many mental hospitals as an aid to the treatment of mental patients. In many municipal hospitals and in all Poor Law infirmaries and institutes there are observation wards in which mental patients can be observed and classified before they are certified and transferred to a mental hospital. In many cases treatment under observation enables the patient to avoid certification, and such patients are not further detained or are treated as voluntary patients. After-care work is being developed, and is done sometimes through subsidised voluntary bodies, again under the provisions of the Mental Treatment Act, 1930.

The State and Voluntary Bodies

Not only do the local authorities run mental hospitals and asylums, but the State has two criminal lunatic asylums and two naval and military mental hospitals. In both cases the patients are handed over to the local authorities if they still require treatment when their terms have expired. There are also 13 hospitals for mental cases, supported by voluntary contributions, legacies and patients' payments, which are registered by the Board of Control for England and Wales, and 7 Royal Asylums in Scotland. Private paying patients are accommodated in private asylums or licensed houses. Over these the Board of Control exercises the right of supervision and inspection, and it visits all persons suffering from mental disorder. It is the authority responsible for licensing premises known as licensed houses, in which mental patients may be detained, in the counties of Middlesex and London and neighbouring areas as defined in the Act of 1890. Outside these areas the justices in the county or borough quarter sessions perform this duty. The Justices must appoint a visiting committee to each licensed house within their area, consisting of one medical officer and three J.P.s. Provision was, however, inserted in the Lunacy Act, 1890, prohibiting any extension of the system of private asylums—known as licensed houses. No new licences are to be issued, nor is any increase in accommodation to be permitted. Provision is also made for the protection and inspection of individual mental patients in private houses, but not more than one such patient may be maintained in private care on unlicensed premises. In Scotland the General Board of Control is responsible for the inspection of all homes for persons of unsound mind and for the licensing of those homes accommodating more than one patient. It visits all certified persons of unsound mind and mental defectives without exception.

Local education committees are interested in the problem of mental welfare and they can, through the school medical service, provide clinics for difficult children. Sometimes child guidance clinics are subsidised for this purpose. (See Chapter XIII.)

Social workers are very important in connection with out-patient clinics and mental observation wards, since they do the valuable work of discovering and elucidating for the doctors the home conditions of the patients. The relationship between statutory and voluntary authorities carrying out mental health work is at the present time the subject of investigation by a committee under the chairmanship of the Earl of Feversham. The aim of this committee is to explore the possible methods of securing further co-ordination of the voluntary bodies which undertake this work, in order to prevent overlapping and waste of effort and money. It is hoped that this Committee's report will give a lead in the general development of the services, by showing how gaps can be filled, and defects remedied.

Conclusion

The Committee on the Scottish Health Services recommended that the law and practice in Scotland relating to the administration of the statutory services should be brought into conformity with that in England and Wales. The Report on the Mental Health Services in Oxford City, Oxfordshire, and Berkshire, published by the Oxford Survey of the Social Services, advocates the appointment of a mental health officer by the local authorities to co-ordinate all their mental health work. Other developments connected with the improvement of the mental health services are discussed in Chapter XIII.

Statistics

The net cost (excluding capital expenditure defrayed out of revenue) of county and county borough mental hospitals in England and Wales was £8,784,000 in 1935-36, or 26s. 7d. per patient per week.

This does not include patients boarded out in local authority hospitals. The expenditure of the voluntary mental hospitals is not known. Broadmoor Asylum cost £74,300 in 1935-36. The net cost of District Asylums in Scotland was £602,656.

England and Wales

Provision for persons suffering from Mental Disorder on January 1, 1937.

	Status				Class		
	Voluntary	Temporary	Certified	Total	Private	Rate-aided	Criminal
County and C.B. mental hospitals	5,655	487	123,609	129,751	9,149	120,534	68
Other premises provided by local authorities	224	—	—	224	37	187	—
Registered hospitals	629	32	1,838	2,499	2,498	—	1
Licensed houses	581	39	2,243	2,863	2,825	38	—
Nursing homes approved under the Mental Treatment Act	67	6	—	73	73	—	—
Naval and military hospitals	—	—	246	246	246	—	—
Criminal Lunatic Asylum (Broadmoor)	—	—	768	768	—	3	765
Public assistance institutions and general hospitals	—	—	15,102	15,102	—	15,102	—
Private single care	10	1	286	297	297	—	—
Outdoor relief	—	—	3,699	3,699	—	3,699	—
Total	7,166	565	147,791	155,522	15,125	139,563	834

SCOTLAND

Provision for persons suffering from Mental Disorder on January 1, 1937.

	Status		TOTAL	Class	
	Voluntary	Certified		Private	Pauper
Royal asylums . . .	906	3,504	4,410	2,663	1,747
District asylums . . .	376	13,458	13,834	832	13,002
Private asylums . . .	45	37	82	82	—
Lunatic wards of poorhouses:					
Unrestricted licence . .	—	264	264	7	257
Restricted licence . .	—	1,041	1,041	1	1,040
Private dwellings . . .	—	1,201	1,201	60	1,141
Training schools (imbecile children not certified) . .	—	35	35	28	7
	1,327	19,540	20,867	3,673	17,194
Criminal lunatic department of Perth prison . . .	—	91	91	—	—
TOTAL . . .	1,327	19,631	20,958	3,673	17,194

MENTAL DEFICIENCY

Specific provision for those suffering from mental deficiency is a late development in English social legislation. Mental defectives tended to become the permanent inhabitants of the "general mixed workhouse," or perhaps more fortunately merely the village idiot employed to look after the bees. The problem of special provision for mental defectives, however, became acute with the growth of the educational services and legislative measures began to be taken from 1886. It was realised also that mental defectives needed the protection of the law to prevent their being maltreated and advantage being taken of their disability. Finally, a special code for the mental deficiency services was drawn up by the Mental Deficiency Act 1913. Now the mental deficiency services in England and Wales are administered under the Mental Deficiency Acts 1913-27 and the Education Act 1921. The Mental Deficiency Acts set out in general terms the persons who are deemed to be defective and subject to be dealt with under these Acts and classify them as idiots, imbeciles, feeble-minded persons and moral imbeciles.

The central departments concerned in the administration of the Acts are the Board of Control, the Board of Education, the Ministry of Health and the Home Office. The Board of Control supervises and inspects all institutions under the Acts and all defectives under guardianship. The Commissioners alone have power to discharge a defective. The Board administers the two State institutions for mental defectives of dangerous or violent propensities which, on December 31, 1936, had 1,159 and 203 occupants respectively. The Board of Education is responsible for all defective children between the ages of 7 and 16. The Home Office may order any mental defective undergoing detention in an institution under its administration to be transferred to an institution for defectives.

Provision is made in the Acts to enable the parents or guardian of a defective child to apply for an order for the child to be detained in an institution or placed under supervision. The procedure is much the same as in the case of a person of unsound mind.

The local education authorities must provide education for all mentally defective children between the ages of 7 and 16 except "idiots" and "imbeciles."* This provision may include the establishment of special classes in public elementary schools, of special day schools or of special residential schools. Details of this provision are given below. The local education authorities are also responsible for notifying any of the following defectives to the Committee for the Care of Mental Defectives of the local mental defective authority:

(i) Those ascertained to be incapable of receiving benefit or further benefit in special schools.
(ii) Those whose presence in special schools is detrimental to other children.
(iii) Those in whose case special circumstances exist which render it desirable that they should be dealt with under the Mental Deficiency Acts.
(iv) Those who are about to be withdrawn or discharged from a special school or class, and in whose case the local education authority are of opinion that they would benefit by being placed under supervision or guardianship or sent to an institution.

Under the Mental Deficiency Acts county councils and county borough councils must appoint a special committee for the care of mental defectives. This committee may be the mental hospitals committee, provided that it includes one or more women members. The committee are responsible for providing for the well-being of defectives passed on to them by the education authority, and for ascertaining what persons under the age of 7 and over 16 in their area are defectives "subject to be dealt with." The circumstances which render a defective person "subject to be dealt with" are:

(*a*) That he is neglected, abandoned without visible means of support, or cruelly treated, or if a representation has been made by his parent or guardian that he is in need of care or training that cannot be provided in his own home.
(*b*) That he has been found guilty of any criminal offence, is ordered, or found liable to be ordered, to be sent to a certified industrial school; undergoing imprisonment, penal servitude or detention in a reformatory or industrial school or in an institution for lunatics or a criminal lunatic asylum; or who, being a woman, is in receipt of poor relief at the time of giving birth to an illegitimate child or when pregnant of such child.

The committee must then place the defective under supervision or present a petition to a Judicial Authority for an order for placing the defective under guardianship or for sending him or her to a certified institution. The committee may maintain in institutions or approved homes defectives other than those "subject to be dealt with."

On January 1, 1937, 81 local authorities in England and Wales out of 123 were making provision for the accommodation of mental defectives and 17 had arrangements for the reservation of beds in certified institutions. In the local authorities' institutions there were 19,319 beds. The maintenance and provision of these cost £1,243,000 in

---

* These last are dealt with by the authorities responsible for mental disorders.

1935-36. There were another 9,671 beds in certified institutions provided by voluntary bodies, such as the Royal Eastern Counties Institution. In public assistance institutions and public health general hospitals 10,264 beds were available. The Board of Control, however, as far as possible discourages the use of public assistance institutions for mental defectives. The local authorities may recover a part or the whole of the cost of the maintenance of any individual in an institution from the parents or guardians of the person. Local authorities under the licence system may grant patients their liberty on certain conditions. This affords the patients a chance to maintain themselves in domestic service or other work and relieves the pressure on the accommodation in institutions. One advantage of the system is that if the patient fails on licence, his return to an institution can be effected without the making of any fresh order.

The mental deficiency authorities make provision also for the care of those under supervision and guardianship. Thus there were on January 1, 1936:

Under statutory supervision ..	36,307
Under voluntary supervision ..	25,048
Under guardianship	3,729
On licence	3,023

The Feversham Committee are now investigating the voluntary bodies which play a considerable part in this work, and which receive grants for it from the local authorities. The Central Association for Mental Welfare and the Brighton Guardianship Society are examples of organisations engaged in these activities. There are also 38 approved homes and 5 certified houses approved by the Board of Control, containing 788 and 228 beds, respectively, which cater entirely for paying patients.

In Scotland the law relating to mental deficiency is contained in the Mental Deficiency and Lunacy (Scotland) Act 1913, the Education of Defective Children (Scotland) Act 1906, and the Education Authorities (Scotland) Mental Deficiency (Notification) Regulations 1930. It is fairly similar to the English law. The General Board of Control, the Department of Health for Scotland, the Scottish Education Department, and the Scottish Office, are the central authorities concerned. The county councils and councils of the larger burghs are the mental deficiency authorities, and the county councils and councils of the four cities the educational authorities. £264,000 was spent in 1935-36 by the local authorities in Scotland on the maintenance and provision for certified mental defectives. In Scotland there are 5 certified institutions which are provided by voluntary bodies.

The number of certified mental defectives on the register in Scotland at January 1, 1937, was 4,564. This total is equivalent to 92 per 100,000. In England and Wales the figure was 103 per 100,000. The total number ascertained as subject to be dealt with was less than 170 per 100,000, against 218 in England and Wales. This suggests that the provision in Scotland for mental defectives is even less complete than it is in England and Wales, since there is no reason to suppose there are proportionately more mental defectives in England and Wales than there are in Scotland. The number of mentally defective children on July 31, 1935, for whom provision was made in special schools or classes in Scotland was 4,905.

Incidence of Mental Defect

In 1929 the Joint Committee of the Board of Education and the Board of Control on Mental Deficiency issued its report. It is commonly known as the Wood Committee's Report. Under the auspices of the committee a special investigator, with an adequate staff, made a study of the incidence of mental defect in six typical areas, each containing a population of about 100,000 persons. On the basis of the findings the committee calculated the extent of mental deficiency in England and Wales. They estimated that the number of children between the ages of 7 and 16 who were mentally defective within the meaning of Section 55 of the Education Act 1921, was approximately 105,000, Since the Education Act covers those who are educationally as well as socially defective, only 70,000 of these were defectives within the meaning of the Mental Deficiency Acts. They thought the number of lower grade defective children, "imbeciles" and "idiots" under 16 years, to be more than 30,000. The number of adult defectives of all ages they concluded must have been not less than 150,000. They then estimated that the total number of persons of all ages in England and Wales who are "mentally defective in the true sense, that is who are by reason of incomplete development of mind incapable of independent social adaptation," was 250,000. The committee thought, however, that their investigations had inevitably lacked completeness and that therefore there were in 1929 probably at least 300,000 mental defectives in England and Wales, or 8 per 1,000 of the population.

Yet the local education authorities had ascertained at the end of 1929 only 33,000 mentally defective children in England and Wales. (In 1936 the figure was 27,688). And only about half these children were in special schools. The accommodation has not been very much increased since.

	Number of schools 1936	Accommodation	
		1935	1928
Boarding-schools . .	22	2,283	1,800
Day-schools . . .	138	14,259	15,000

There are also special classes in ordinary schools, but the number of these is not known.

The total number of known adult defectives in England and Wales at the time of the Wood Committee and in 1936-37 was as follows:*

	1928	January 1, 1937	Per 100,000 of population	
			1928	1936
Known to local authorities . . .	61,522	120,731	157	297
Ascertained subject to be dealt with .	38,979	88,699	99	218
Of whom In institutions or under guardianship	21,333	46,170	54	113
Under statutory supervision .	18,159	36,307	46	89

---

* The increase is partly due to the provision of the Local Government Act 1929, which extended to cases in receipt of poor relief the duty of the local authorities to ascertain all defectives in their area. It is also partly due to greater thoroughness in ascertainment.

The Wood Committee were disturbed by the discovery of the high incidence of mental deficiency compared with that found by the Royal Commission on the Care and Control of the Feeble-Minded in 1904. The mean incidence of mental defect in the areas investigated under the directions of the Wood Committee was 8.56 per 1,000 (or about 8 per 1,000 excluding children who were only educationally deficient). The figure for the areas studied in 1904 was 4.6 per 1,000. Some of this difference can be ascribed to the more complete ascertainment in the later investigation, the lowering of infant mortality, the greater longevity of defectives, and to somewhat different standards. But the Wood Committee considered that "it is hard to believe that there has not been some increase in the incidence of mental deficiency during the period."

Another important social phenomenon brought out by the Wood Committee's investigation was that the mean incidence of defect for all ages in urban areas was 6.71 per 1,000 of the population compared with 10.41 in rural areas (including those suffering from an educational deficiency). It was also shown through one investigation that a high incidence of mental deficiency was found in a new housing area containing inhabitants of an old slum, where the local authority had been forced to intervene to prevent the growth of slum conditions. The committee pointed out that this connection between mental deficiency and bad conditions only illustrated the urgency of the problem of controlling mental deficiency.

The aim of the Mental Deficiency Act 1913 was broadly speaking that no mental defective should slip through the educational sieve, and that the special procedure for the ascertainment of others should only be applicable to those outside the educational system in 1913. Unfortunately it has proved completely impossible to bring about this state of affairs. Sometimes teachers hesitate to give information which might lead to certification. Sometimes classes are so large that it is impossible for them to determine adequately the capacity of all the children. Routine medical inspections are often too hurried for doctors to detect mental deficiency. Doctors and teachers are reluctant to go to the trouble connected with certifying a child if there is no room for it in a special school, as is frequently the case. Moreover, if a defective child remains in a public elementary school the local education authority has no power to notify the child to the local mental deficiency authority when it leaves school, as it has if the child is at a special school.

The Wood Committee's Recommendations

Obviously one of the main breaches in the system for the care of mental defectives is the lack of special schools. But geographical reasons prevent the extension of the special day school system except in large towns, and the establishment of residential schools entails an almost prohibitive expenditure. The Wood Committee therefore recommended that local education authorities should modify the organisation of the schools, elementary and special, in their areas so as to provide suitable education for all children, both normal and mentally deficient, except those in need of immediate care and control under the Mental Deficiency Acts. Special schools should become part of the elementary school system. This would involve the abolition of the requirement that local education authorities should certify mentally defective children, but it would not absolve them from the duty of classifying and providing suitable education for all the children under their care. Courses for retarded children should form an essential part of the local education authorities' provision of post-primary schools.

Further the Committee considered that a break should be made at the age of 11 years for mentally defective children, as for normal children. Children under 11 who are able to attend a school should be divided into two groups, a higher and a lower. The local education authority would be entirely responsible for the higher group of feeble-minded children, but would notify those in the lower group—that is, broadly, imbeciles and idiots—to the local mental deficiency authorities. The local mental deficiency authority would be responsible for these children, but it would be the duty of the local education authority to provide education for them, in return for payment by the local mental deficiency authority.

At the age of 11-plus there should be a survey of all children, normal and defective, to decide on the suitable type of post-primary education. At this survey the mentally defective children would be carefully examined and it would be decided which children should be transferred to the local mental deficiency authority. Those who had made no progress in school would be notified and become the entire responsibility of the local mental deficiency authority. The local education authority would have the power (but not the duty, as in the case of children under 11) to provide training for notified children in return for payment.

The committee also urged that mentally defective children should attend school from the age of 5 till 15, and so have the same school years as normal children.

Among the committee's recommendations concerning adults the most striking one was the need for increased institutional treatment. For this purpose local mental deficiency authorities should be able, in many cases to combine to provide a fully equipped central colony, which would take defectives of all ages and grades. In a colony, the committee considered, defectives can find the conditions most suited to them—useful work can be provided for all but the lowest grades. Moreover, more use should be made, the committee thought, of the system of licensing suitable defectives to go out and to do work such as domestic service. This system enables the authorities to test the patient's fitness to live in the community and therefore to be discharged, besides relieving the pressure on institutions. Finally, it is of great importance that the obligation of local mental deficiency authorities to provide training for those under their care should be enforced.

The committee also pointed out the need for research work into the prevention and causation of mental deficiency and into its relation with other social problems.

In the Report already cited on the Mental Health Services in Oxford City, Oxfordshire and Berkshire, by the Oxford Survey of Social Services, it is suggested that at least modification of the law should be secured so that mental defectives in elementary schools should be notified and thus not deprived of the help and supervision of the Mental Deficiency Acts between the age of 14, when they leave school, and the age of 16, when they may come under the purview of the local mental deficiency authorities. This report also recommended that a medical officer of mental health should be appointed by a local authority to secure co-ordination between all the mental health services.

The question of the sterilisation of mental defectives is discussed in Chapter X. But it is apparent that sterilisation will not make radical inroads into the incidence of mental deficiency nor substantially reduce the need for institutional treatment.

THE TUBERCULOSIS SERVICE

Introduction

With the growth of knowledge about tuberculosis, whose ravages accounted for one death in nine in the last decade of the nineteenth century, methods of prevention and treatment were introduced. In 1912 there came provision in England and Wales (after previous partial steps) for compulsory notification of all forms of tuberculosis. Meanwhile, local authorities and voluntary organisations had been establishing dispensaries and building sanatoria to provide for tubercular cases. In England and Wales there were at that time some 80 dispensaries for the treatment of tuberculosis established by voluntary or municipal effort, whilst about 1,500 beds had been provided by local authorities, and some 4,200 beds by voluntary or provident enterprise. In Scotland there was, among others, the well-known model scheme of Sir Robert Philip at Edinburgh. When, in 1911, arrangements were made for creating a National Health Insurance System, it was realised that even stronger measures must be taken to combat tuberculosis, since it would become a great burden on the new insurance scheme.

Incidence and Mortality

One of the great difficulties of the tuberculosis service is the reluctance of persons who have reason to suspect they may have contracted the disease to seek medical advice, and the refusal of sufferers to disclose their illness early enough. This prevents the doctors from taking measures to cure individuals. It also prevents the local authorities from taking measures to prevent the spread of infection from pulmonary tuberculosis, which is now by far the most prevalent form of the disease. This reluctance to disclose the illness is illustrated by the fact that 9.9 per cent of the deaths in England in 1936 were cases which had never been notified.

Between the ages of 10 and 40 tuberculosis accounts for more deaths than any other one disease. After 40 both cancer and heart disease become more fatal for women, but for men the danger of tuberculosis exceeds heart disease up to 45 and cancer up to 50. In the 20-25 age group very nearly half of all female deaths are due to tuberculosis.

Complete records are available for age at death. The age of all cases notified, or otherwise coming to the knowledge of medical officers of health is also recorded. These figures are, of course, not so complete, but they give some indication of the ages at which people are affected by the disease, and the ages at which it is most likely to prove fatal. In Figure 3 the horizontal scale is the age of the patient, and the vertical scale is the number of new cases or deaths per 100,000 living at each age in 1935. The thick lines represent deaths and the thin lines new cases coming to the knowledge of M.O.H.s. The plain lines represent pulmonary and the broken lines non-pulmonary tuberculosis. Males are shown in black and females in red in each case.

It must be remembered that people who died in 1935 contracted the disease, and were mostly notified, some years earlier. Thus, even if notification were complete, it would be impossible to say what proportion of cases proved fatal at each age. Nevertheless, these curves show in general terms that the age incidence of cases differs markedly from that of deaths, and that recoveries are much more likely at some ages than others. Non-pulmonary tuberculosis is mainly confined to childhood, and affects boys rather more

TUBERCULOSIS

IN ENGLAND AND WALES

Figure 3

Number of known new cases and number of deaths per 100,000 of population at each age in 1935

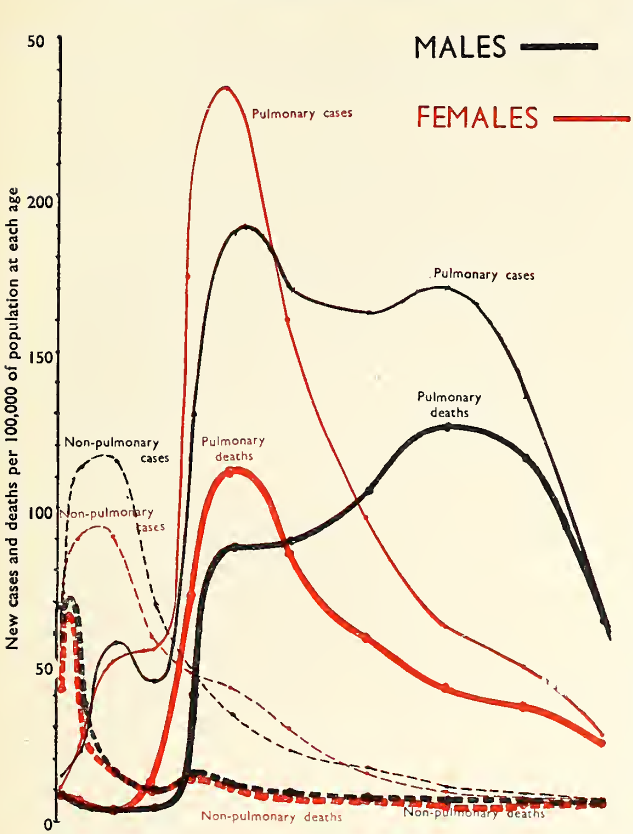


Figure 5

Deaths from pulmonary tuberculosis per 100,000 of population at each age in County Boroughs outside Greater London and Rural Districts in 1936

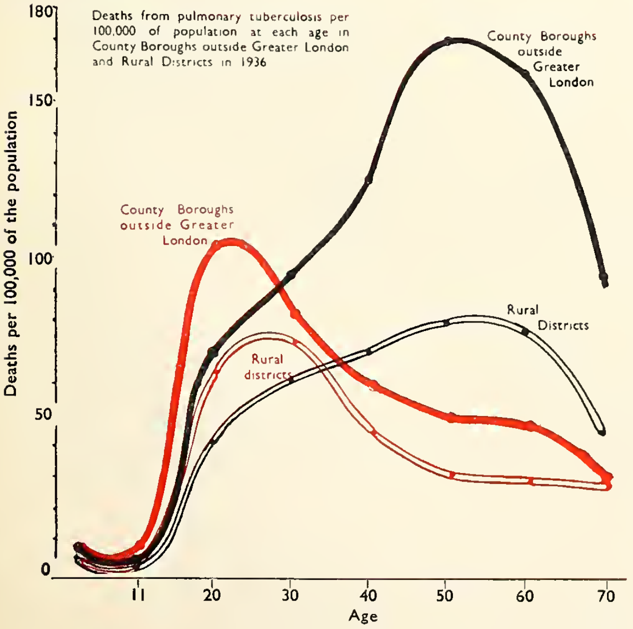
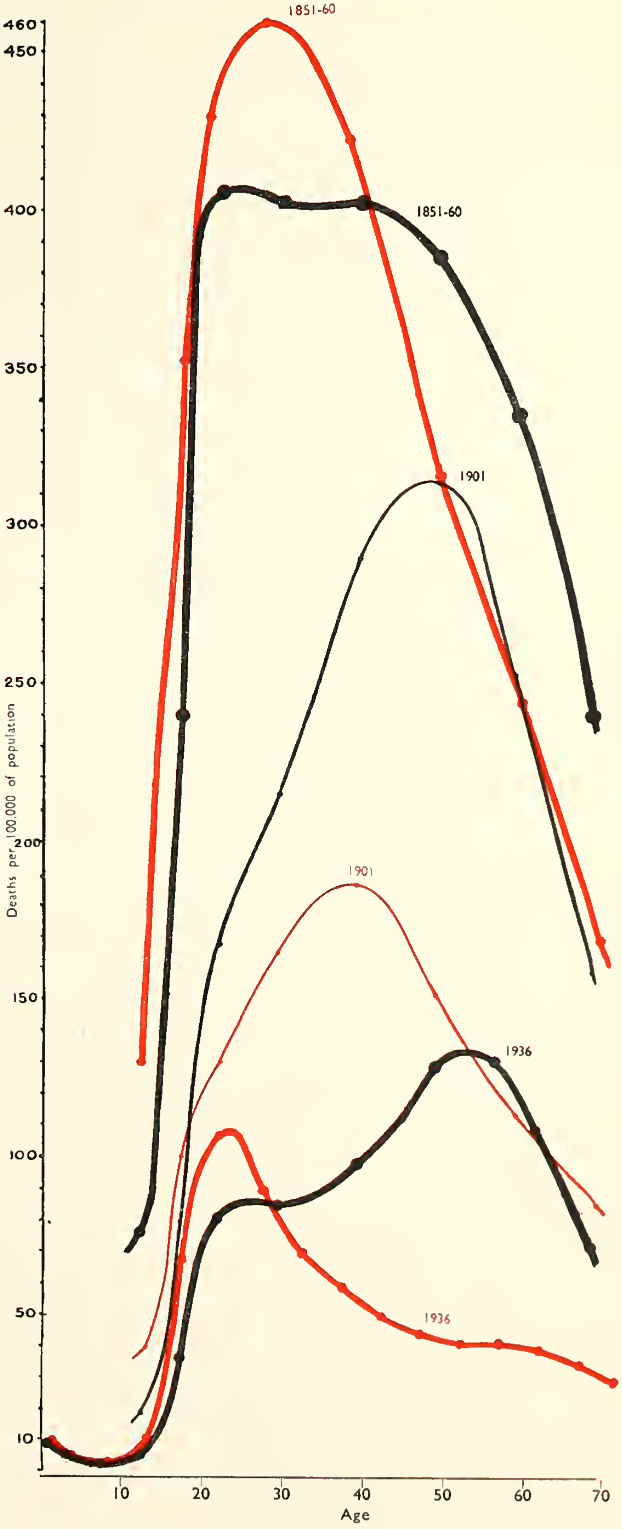


Figure 4

Deaths from pulmonary tuberculosis per 100,000 of population at each age in 1851, 1901 and 1936



than girls. For babies it is very often fatal, but after the age of two the great majority of cases do not die. Pulmonary tuberculosis is most common in the early twenties for both men and women. For women the risk of contracting the disease declines very rapidly with increasing years, but for men there is a secondary peak about the age of 50, and it is at this age that by far the most male deaths occur.

All these figures relate to England and Wales. In Scotland the pulmonary death-rate is lower for men of all ages, and for young women, but higher for children. The non-pulmonary death-rate is higher at all ages, especially for young children.

Figure 4 shows for England and Wales the incidence of deaths from pulmonary tuberculosis in the decade 1851-60, in 1901 and in 1936. The horizontal scale again represents the age of the victim, and the vertical scale deaths per 100,000 living at that age. It will be seen that for males (shown in black) the greatest improvement has been during the century, but that the second half of last century saw a more striking reduction for females (red lines), and a very notable fall in the deaths of young adult males. But perhaps the most remarkable feature is the lack of improvement during the century in the 20-25 female group. Up till about 1922 there was a steady retrogression, but since then slight progress has been made. In all other age groups progress has been fairly continuous. In Scotland, progress has been more uniform at different ages, but young adult females have benefited less than other groups.

There are no means of telling the proportion of cases which terminate fatally. Notificaion is not complete, and includes suspects who are found to be free from the disease, but even if it were complete and exclusive, the proportion of deaths to notifications would not give the required figure. It would also be necessary to know how many years before death each case was notified. Since the numbers of both cases and deaths are continually falling, the proportion of deaths to cases notified would vary according to the length of time lag allowed. But speaking very generally, it appears that the ratio of notifications to deaths is about two to one for pulmonary and between three and four to one for non-pulmonary tuberculosis.

Since 1930 the number of cases certified as recovered has been recorded. These must have shown no active symptoms of pulmonary tuberculosis for five years, or non-

England and Wales

	1931 and 1932	1935 and 1936	1935/36 as per cent of 1931/32
Pulmonary:			
1. Deaths	57,285	48,404	84½
2. Certified as Cured	20,212	17,254	85½
2 as per cent of 1	35	36	101
Non-pulmonary:			
1. Deaths	12,191	9,065	74
2. Certified as Cured	12,760	11,793	92
2 as per cent of 1	105	132	126

pulmonary for three years. These figures cannot be used to ascertain the proportion of deaths to recoveries, for besides the cases certified as cured every year there are considerable numbers who give up treatment, and many of these may be at least temporarily cured. But the figures probably give a fair indication of the trend in the proportion of cures and fatalities.

The ratio of pulmonary "recoveries" to deaths has remained approximately constant in the last six years, but the ratio of non-pulmonary has risen by over 25 per cent.

Effects of Urbanisation

Figure 5 shows the contrast in death rates at all ages between rural areas and the county boroughs outside Greater London. The group most affected is males over 45. The effects of inadequate room space were studied for the period 1930-32 and it was found that in the 15-25 female age group, where the lack of improvement has been noted earlier in this section, there was a very definite and remarkable retrogression in congested areas between 1911 and 1930-32, as the following table shows:

Average Density of Persons per room in area	Per cent increase (+) and decrease (—) in death rate 1911-1930/32	
	County Boroughs (as in 1911)	Administrative Counties
Over 1.15	+70	+21
1.00 — 1.15	+13	
0.85 — 1.00	0	+15
0.70 — 0.85	—15	—15
0.55 — 0.70	—24	—26

Since 1932 there has been a slight, but fairly general, improvement in all but a few of the worst areas.

Tuberculosis is generally agreed to be a poverty disease, and statistical evidence of this was provided by the Registrar-General's survey in 1921-23 of the incidence among different social classes. The mortality from pulmonary tuberculosis was found to be about three times greater among Class V, the unskilled workers, than among Class I, the upper and middle classes. An investigation in Jarrow in 1933 by F. C. Bradbury, the results of which were published in his book, 'Causal Factors in Tuberculosis,' showed that out of 1,300 families, 55 per cent with an income of less than 10s. per week per head had a sufferer from tuberculosis, whereas only 35 per cent of the other families had one. More evidence of the relation between tuberculosis and environmental and other conditions is given in Chapter II.

Tuberculosis Service

Under the National Health Insurance Act of 1911 treatment for tuberculosis was made one of the benefits of insured persons (Sanatorium Benefit), and the Act also made provision for research and education. Early in 1912 a Departmental Committee was appointed by Parliament to consider the problem of tuberculosis in the United Kingdom in its preventive, curative and other aspects, and to advise on the organisation of schemes for the prevention and treatment of tuberculosis. The main lines of the national scheme which was subsequently announced by the Government in 1912, coupled with the provision of a 50 per cent annual exchequer grant on net maintenance costs, and aided also by capital grants out of a sum of £1,500,000 made available for this latter purpose under the Finance Act of 1911, were based on the advice given in the Interim Report of the Departmental Committee. The provision made was to be available for the whole community and not merely for insured persons, and the organisation of the scheme in each locality was to be undertaken by the county or county borough council or a combination of these bodies. The first unit was to be the tuberculosis dispensary, with a special skilled medical staff, acting as the centre for diagnosis, detection of new cases, and some special forms of treatment, in touch with the general practitioners of the area, and also as a centre for education and information and for after-care. The second unit was to comprise the sanatoria, hospitals and other residential institutions. In administrative charge was the medical officer of health, the organisation of the scheme being essentially a part of the public health administration of the area. By the passing of the Public Health (Tuberculosis) Act, 1921, the organisation by county and county borough councils of schemes on these lines for the treatment of persons suffering from tuberculosis (including insured persons) became obligatory, and an end was put to the artificial distinction between the insured and the uninsured tubercular patient.

Thus, to-day in England, outside London, 46 county councils and 75 county borough councils each undertake a scheme for the institutional treatment of tuberculosis for the particular council's area; the remaining three county councils and four county borough councils exercise their functions through three tuberculosis joint committees, each of which conducts a scheme for the combined areas of the county and county borough councils constituting the joint committee. Each scheme is worked in association to a greater or less degree, according to the circumstances of the area, with voluntary bodies. There are also three joint sanatorium committees exercising the functions of the constituent councils in the matter of the provision and maintenance of sanatorium accommodation, one of which is the recently-constituted Poole Joint Sanatorium Committee for some of the towns in the Teeside and Tyneside areas. In London, the London County Council are responsible for the tuberculosis service as a whole, and themselves provide the residential treatment while the dispensary service is undertaken by the city council and the 28 metropolitan borough councils.

There were in England on December 31, 1936, 21,362 beds available for the treatment of tuberculosis in institutions belonging to local authorities. In accordance with the Local Government Act, 1929, three poor law institutions had been "appropriated" as *ad hoc* tuberculosis hospitals, while certain accommodation in 43 other poor law institutions which have been similarly "appropriated" as public health hospitals, has been approved for the treatment of tuberculosis. There were also in 1936, 8,415 beds in "approved" institutions belonging to voluntary bodies, but a number of the beds in these institutions are occupied by private patients. Apart from clinics devoted exclusively to particular kinds of treatment, and the out-patient departments of general hospitals, there were 466 approved tuberculosis dispensaries available.

In Wales a voluntary body, King Edward VII Welsh National Memorial Association, does the tuberculosis work for the county councils and county borough councils and receives a grant from them. The Association possessed in 1936 five sanatoria and 13 hospitals which provided 1,821 beds. Owing to the lack of hospital accommodation, on December 31, 1936, 1,691 tubercular patients and 108 observation cases were in beds rented from the Public Assistance Committees by the Association. The Association also possesses 14 main dispensaries.

The tuberculosis dispensary is considered principally as a receiving and clearing house and a centre for diagnosis, consultation and observation, rather than as a place for actual treatment of patients. X-ray examinations and sputum examinations are arranged from the dispensaries. The clinical and executive work of the dispensaries is carried out by medical officers with special qualifications (known as tuberculosis officers), and by an attendant staff of qualified tuberculosis visitors and nurses. It is the duty of the tuberculosis officer to make recommendations for residential treatment of tubercular patients, to visit the homes of such patients, and to examine "contacts." Other forms of non-institutional services often available under the dispensary service are dental treatment, home nursing, and the supply of extra nourishment for patients who are living at home.

Residential institutions comprise sanatoria and hospitals for pulmonary tuberculosis, and hospitals for the treatment of non-pulmonary tuberculosis, e.g. lupus, abdominal, and bone and joint tuberculosis. Certain other institutions have been provided and are utilised under various schemes, including training colonies and village settlements, and residential open-air schools. The "sanatorium" is intended for the more or less prolonged treatment of early cases (ambulant and febrile), or of those in which there is a prospect of recovery from the disease, and the treatment afforded in these institutions may include "occupational treatment." The "hospital" is intended for the observation of doubtful cases, treatment of acute cases, short-period treatment and education in hygiene of "intermediate" and "chronic" cases, and isolation of dangerously infective and advanced cases. But the residential institution which combines both sanatorium and hospital accommodation is considered to be the best provision and is the one more generally adopted to-day by tuberculosis authorities. In connection with three of the sanatoria provided by voluntary bodies in England, village settlements have been established in which, after completion of their treatment and training, the patients can take up their permanent residence and live with their families, permanent employment being provided for them in the workshops of the institution in a variety of trades at trade union rates of wages. Thus they are absorbed into the community and enabled to make a contribution to it. As regards non-pulmonary tuberculosis, arrangements for the treatment of lupus and genito-urinary tuberculosis are usually made with special or general voluntary hospitals, while abdominal and other cases may be treated in a special non-pulmonary block at the sanatorium hospital of the local authority. Provision for the treatment of bone and joint tuberculosis is usually made at a special orthopædic hospital, and there are now considerable numbers of institutions for this purpose in England.

In addition to the expansion of the institutional accommodation, considerable developments have been made during recent years in the methods of treatment, e.g.

more frequent employment of collapse therapy in pulmonary cases, and increased use of X-rays for purposes of diagnosis and treatment. The proper use of sanatorium treatment is better understood, whilst in the field of non-pulmonary tuberculosis very great advances in medical knowledge and the technique of treatment have been made, particularly in regard to tuberculosis of the bones and joints.

After-care work, including amongst its many activities help for families where either the father or the mother is admitted to a sanatorium, is generally carried out by a care committee in association with charitable and voluntary agencies.

In Scotland provision for tubercular cases is made by the county councils and councils of the larger burghs under the limited powers conferred on local authorities for the treatment of infectious diseases by the Public Health Act (Scotland) 1897. Sanatoria and dispensaries have been provided by these authorities and in addition there are many voluntary hospitals for the treatment of tuberculosis. Approximately 5,000 "approved" beds are available in Scotland for tuberculosis cases and 42 dispensaries are in operation. Patients may receive institutional or home treatment, according to need, and for those at home, in addition to medical care, extra nourishment and medicines are supplied when necessary. For specialised treatment such as is often necessary in non-pulmonary cases patients are frequently sent to appropriate voluntary institutions, the cost of treatment being borne by their local authorities. After-care work has not been developed in Scotland. The Committee on the Scottish Health Services considered the number of beds in Scotland for tubercular cases adequate, but thought that more specialised treatment for each type of the disease should be provided at regional centres. The only training colony in Scotland is at Harrmyres.

The total expenditure by local authorities in England and Wales on the tuberculosis services was £3,827,000 in 1934-35 and in Scotland £653,221 in 1933-34.

Voluntary bodies play an important part, as can be gauged from the above account, in the tuberculosis service. Care committees are generally organised by voluntary bodies. The National Association for the Prevention of Tuberculosis does invaluable propaganda work throughout the British Isles. It also runs a "colony" for tubercular boys at Borrow Hill, Frimley, Surrey, where boys are trained in clerical, farm and garden work, and are afterwards helped to obtain suitable positions. The village settlements, such as Papworth and Preston Hill, are organised by voluntary bodies.

The tuberculosis service is an integral part of the health services. It is part, for instance, of the general infectious disease service. The regulation of the milk supply is also partly for the purpose of combating tuberculosis; for it has been estimated that 80 per cent of abdominal tuberculosis, 35 per cent of bone and joint disease, and 64 per cent of cervical gland infections are of bovine origin. Similarly, the ordinary general practitioner assists in the campaign against it. Housing and nutrition affect tuberculosis and consequently the tuberculosis service is closely linked to services connected with these problems. Some local authorities, for example, have special schemes whereby tubercular cases are specially provided for on new housing estates.

Improvements

Obviously the tuberculosis service would be strengthened by improving general medical provision as proposed in Chapter VII. Similarly, better environmental services and nutrition will help to eradicate tuberculosis. For although tuberculosis is an infectious disease, and some still hold that hereditary factors account for a predisposition towards the development of the disease after infection, economic factors associated with poverty, bad housing, and under-nourishment are undoubtedly predisposing causes in contracting it. Sometimes the dispensary is inadequately housed and is not open in the evening. These deficiencies should be remedied. Adequate accommodation in sanatoria should also be provided wherever it is not at present available. The Committee on the Scottish Health Services urged that the provision in Scotland should be reorganised. They advocated that the Scottish local authorities should have the wide power given to the English and Welsh authorities under the Public Health (Tuberculosis) Act, 1921. They pointed out also the value of co-operation between the clinic and dispensary service for tuberculosis and other general clinics and dispensaries.

Efficient "follow-up" and after-care service when sanatorium treatment is completed are essential if relapses are as far as possible to be prevented. Above all, provision should always be made to see that the patient who has recovered in a sanatorium is not sent back to the same environmental conditions from which he came, if these are likely to lead to a relapse. Further, suitable employment should be found for him which will not by its conditions upset his health. If the work is light and the pay insufficient to afford him adequate nourishment it should be supplemented. Sometimes a discharged patient, on being moved to a new house, is undernourished owing to the failure of the local authority to grant him any kind of rent relief. The absence of measures of this nature often makes the whole service much less effective than it might be.

VENEREAL DISEASES SERVICE

The threat of venereal diseases to the health of the nation, and particularly to the health of unborn children, broke down the Victorian reticence of pre-war England over the public discussion of such unsavoury matters. In 1913, therefore, a Royal Commission was appointed to examine schemes to combat these diseases. It presented its Final Report in 1916, when the problem had become more acute owing to the spread of infection during the War. The scheme then recommended and put into operation remains substantially unchanged.

Venereal disease is not only the cause of many deaths, but it is a continual threat to the health and happiness of future generations. Perhaps the greatest disaster it brings on the individual sufferer is "general paralysis of the insane." Moreover, infected parents account for much blindness from birth and early infancy through gonorrhœal and syphilitic infection of the eyes, and for a considerable amount of mental deficiency.

The Service

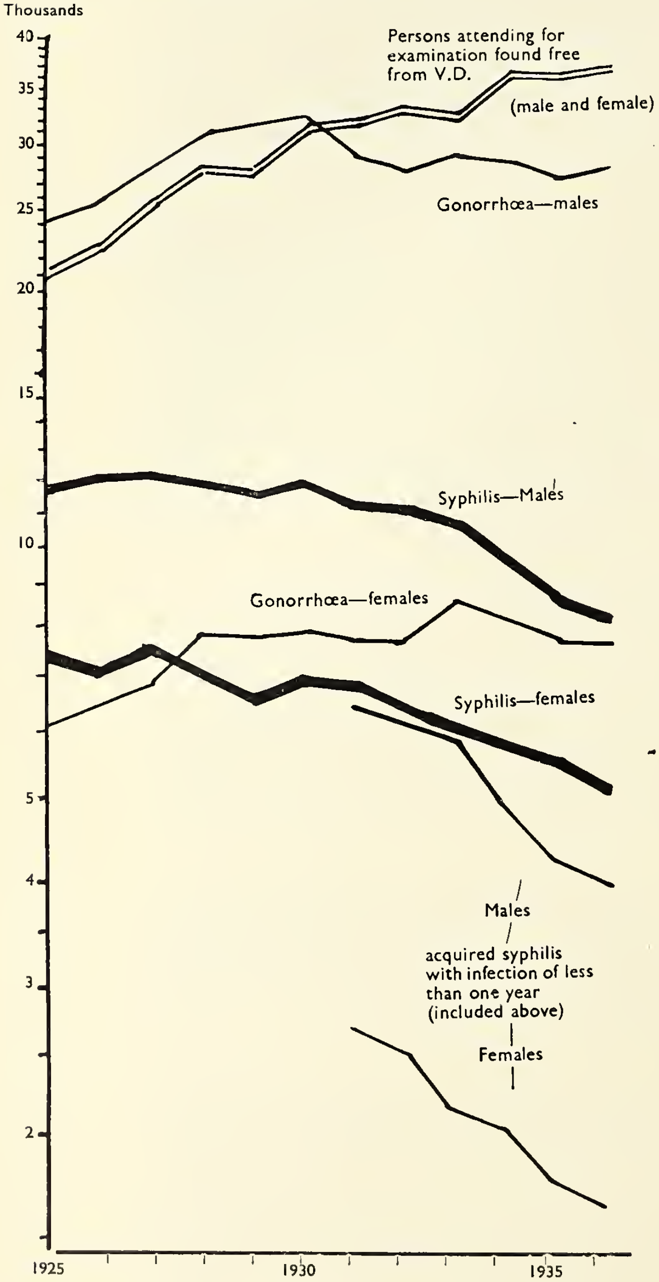
Regulations were issued under the Public Health Acts of 1875 for England and Wales, and under the Public Health (Scotland) Act of 1897, empowering county boroughs, county councils and councils of the larger burghs to spend money in making provision to resist venereal diseases. This provision included placing at the disposal of the general practitioners free facilities for the examination of laboratory specimens from persons suspected of suffering from a venereal disease and for the service of consultants. General

Figure 6—VENEREAL DISEASES

ENGLAND AND WALES

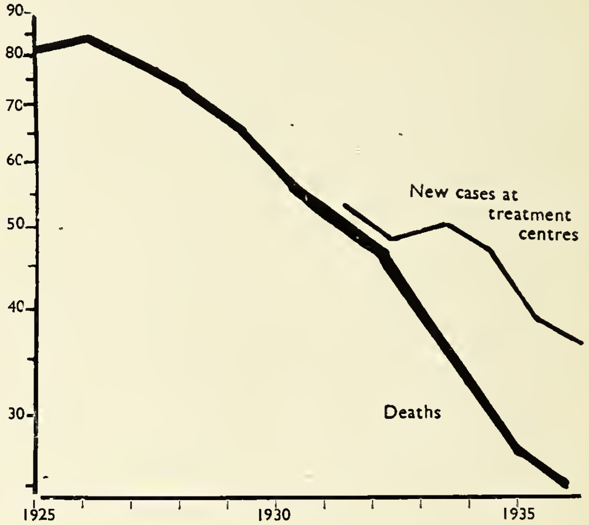
TREATMENT CENTRES

Cases dealt with for first time each year 1925-36

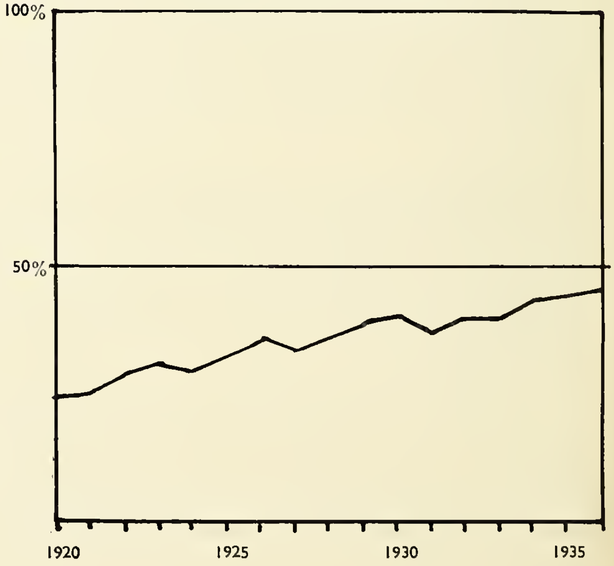


CONGENITAL SYPHILIS

of infants under one year, 1925-36



Number discharged after final test of cure as per cent of total number taken off the books every year 1920-36—England only



practitioners were also enabled to obtain under certain conditions arsenobenzene compounds free for the treatment of their private cases of syphilis. Moreover, local authorities were required to set up treatment centres for the treatment of persons suffering from venereal diseases, and were also empowered to promote propaganda work against venereal diseases.

Many of the local authorities run their treatment centres at the voluntary hospitals. The London County Council, for example, pays the voluntary hospitals £83,000 per annum to do the work for London and the Home Counties. But it also has a centre of its own. Similarly, centres are provided by some local authorities in *ad hoc* premises or at the municipal general hospitals, and provision is sometimes made for the work to be done at the tuberculosis or other municipal clinics. Local authorities expenditure on venereal disease services in England and Wales was £439,590 in 1934-35 and in Scotland £85,932 in 1933-34. In 1937 there were 186 centres in England and Wales, including 119 conducted in voluntary hospitals, and 52 in Scotland. The London scheme is worked in collaboration with the county borough councils of East Ham, West Ham and Croydon and the county councils of Buckinghamshire, Essex, Hertfordshire, Middlesex, Kent and Surrey, and is an interesting example of the regional collaboration of voluntary and public bodies. Some, but by no means all, authorities carry on an adequate propaganda service. The British Social Hygiene Council also does useful propaganda work, and is assisted financially by many county councils and county borough councils and by the corresponding authorities in Scotland.

In parts of Scotland and Wales difficulties arise owing to the distance that patients must travel to the centres. Consequently, the work falls primarily on the general practitioners, who are not necessarily sufficiently skilled to give adequate treatment. The Committee on the Scottish Health Services remarked that the association of the treatment centres' work with the teaching schools was very valuable, since in Scotland much of the venereal disease work must fall on the general practitioner. Venereal disease work must be kept closely in touch with the preventive work of the Maternity and Child Welfare clinics and special Maternity and Child Welfare clinics for venereal diseases cases have been opened in some areas. Pupil midwives, too, are now sometimes given some special training in the detection of venereal disease, thus enabling them to assist in the work of stamping it out. Further, to protect the public, the Venereal Diseases Act of 1917 prohibits the treatment of these diseases by anyone who is not a qualified medical practitioner and forbids private advertising of remedies. Special provisions for treating seamen and affording adequate publicity to this service are provided under an international agreement signed at Brussels in 1924.

Incidence and use of Centres

Venereal diseases are now classified as syphilis and gonorrhœa and soft chancre. None of these are notifiable diseases, and deaths resulting from them are usually certified under other causes. The only indication of the incidence, therefore, is the cases attending treatment centres.

An inquiry conducted by the Ministry of Health in 1936 showed that 88 per cent of the total number of cases of arsenobenzene compounds supplied free under the scheme in England were used by the centres. This shows that the great majority of cases under treatment secure it through the centres. It is not, of course, known how many cases go untreated. There is some evidence to show that centres are tending to be more fully used. Figure 6 shows that the numbers attending for examination found to be free from venereal disease is steadily rising. Moreover, the number of attendances per current case has approximately doubled since 1923. The figure shows that of the number removed from the books every year, the percentage who have passed the final test of cure is rising.

The authorities concerned insist that treatment shall be given in confidence, and as far as possible, the privacy of the patients is respected. Treatment is, of course, free.

In view of the probable relative incidence of gonorrhœa and syphilis, it is thought that the proportion of persons infected with gonorrhœa who avail themselves of treatment is low compared with syphilis. But the fact that the number of new gonhorrœal cases remain fairly constant while new syphilis cases are steadily falling, may be taken as an indication that this proportion is rising.

Since 1931 the number of cases of acquired syphilis with less then one year's infection has been recorded. This gives the best indication of the incidence of recent syphilitic infection. The fall, even in five years, is remarkable.

Cases of soft chancre are very much less frequent than gonorrhœa or syphilis. In 1936 there were 880 males and 26 females out of a total of 50,000 for all venereal diseases.

After Effects

Figure 6 shows the number of babies under one year appearing for treatment for congenital syphilis and the infant mortality from that cause. It will be seen that there has been a remarkable fall in infant mortality from congenital syphilis. It is clear that a much larger proportion of cases are now being brought for treatment, but the divergence between case rate and death rate may also show that a lower proportion of cases prove fatal.

It is not possible to measure many of the after effects of venereal disease, as it causes much ill-health which is not directly attributed to it. One of the gravest of the recognised effects is general paralysis of the insane. As this develops slowly the sufferer may do much social injury before he can be confined to an institution. Over a thousand persons suffering from it are admitted to institutions in England and Wales every year. It is usually the result of infection contracted many years before, and thus the number admitted does not give any indication of recent progress in preventive measures, but it has fallen by about 25 per cent since before the War.

Problems and Remedies

The greatest difficulty of the centres is the "defaulter" who leaves the centre before treatment is finished, although there is evidence to show that the standard of "cure" has risen, and consequently many defaulters have ceased to be infectious. The dimensions of this problem can be gauged from the fact that in England in 1936, 5,874 persons ceased to attend before the final tests of cure and 19,100 before the completion of treatment.

This problem of the "defaulter" has strengthened the arguments in favour of compulsory control over these diseases, particularly in the case of syphilis, which is easier to diagnose and is held to be more dangerous to public health than the other venereal diseases, since it leads to progressive ill-health and sometimes mental disease, and can be transmitted with disastrous results to succeeding generations.

On the other hand, it is argued that if compulsion were introduced the threat of compulsory treatment and the removal of the completely confidential system at work at the moment would lead to persons not disclosing their infection. It is asserted that this happened in South Australia. This possibility of disclosure would also it is thought, lead, more people to resort to "quacks." Partly for these reasons Parliament refused to sanction the application of Edinburgh City Council in 1928 to secure some control over persons infected with venereal diseases. To throw further light on this question the Ministry of Health, in response to a request in Parliament, sent a mission in July 1937 to Denmark, Holland, Norway and Sweden, where the incidence of syphilis has become very low, and where treatment and notification are mainly compulsory.

With the approval of most medical opinion, and supported by the opinion of the local authorities, the majority of the Committee on the Scottish Health Services recommended a system of compulsory notification of syphilis, since without this it would be illogical and impracticable to compel defaulters to continue treatment. Accompanying notification they recommended compulsory treatment. They thought, however, that it might not be expedient to introduce these changes immediately throughout Scotland, and therefore they suggested preliminary experiments by large local authorities.

CANCER AND THE RADIUM SERVICES

Mortality

The rise in the death rate from cancer is often viewed with alarm, for the crude death rate has more than doubled during this century. But for many reasons the crude death rate is a misleading figure. The first and most obvious reason is the changing age composition of the population. Cancer deaths mainly occur after middle age, and thus the proportion of the population liable to be affected is continually increasing. This factor can be eliminated by comparing the standardised death rates; that is, the rates that would have occurred if the age and sex composition had been uniform throughout.

Cancer Deaths per Million Living

	Crude		Standardised	
	Males	Females	Males	Females
1901	691	985	727	944
1911	891	1,087	866	953
1921	1,142	1,281	947	970
1931	1,450	1,516	1,034	974
1936	1,612	1,636	1,068	969
Per cent increase 1901–1936	133	66	47	3

It will be seen that the standardised death rate has risen by nearly half for males, and remained almost stationary for females. But even the standardised death rate is a misleading figure, for there is much evidence to show that cancer is now recognised as the cause of death in many cases which would formerly have been certified as having died from secondary developments such as disease of the lungs induced by cancer in other parts of the body, intestinal obstruction, etc. It is thought that this factor may very well account for the apparent rise, but unfortunately it cannot be assessed. But although the available figures are all subject to this qualification, they do indicate very significant differences in the way in which different age groups have been affected.

In order to show the changes in recent years at different ages, the Registrar-General has calculated the "expected" deaths, or the deaths that would have occurred in 1933-34 if the mean rates recorded during 1911-20 had been operative.

The following table sets out, in relation to certain factors, the cancer deaths in 1933-34, and the excess of actual over "expected deaths."

	Cancer deaths per million living at each age		Cancer deaths per 1,000 deaths from all causes		Excess of actual cancer deaths over expected as per cent of expected
	Number	Excess of actual over expected	Number	Excess of actual over expected	
MALES					
0—	35	4	6	0.7	13
25—	121	11	36	3	10
35—	443	21	82	4	5
45—	1,648	—30	146	—3	—2
55—	4,640	200	197	8.5	5
65—	9,980	1,995	178	35	25
75—	14,450	4,550	107	34	46
85 ÷	13,200	4,850	49	18	58
FEMALES					
0—	30	6	7	1.3	24
25—	154	—4	49	1.2	—2
35—	733	—51	168	—12	—6
45—	2,080	—185	260	—23	—8
55—	4,140	—242	246	—14	—5
65—	7,600	480	176	11	7
75—	11,470	4,400	105	21	25
85 ÷	13,300	4,325	53	17	47

It will be seen that the cancer death rate steadily rises with age, but after middle age it does not rise so fast as the death rate from all causes. The risk of dying of cancer is progressive through life, but the risk of dying of cancer rather than anything else is greatest between 45 and 65 for women, and at about 60 for men. One quarter of all female deaths between 45 and 65 are ascribed to cancer.

The last column shows the relative change over the period, at different ages. It shows that there has been an improvement covering forty years of adult female life, and that it is only after 65 for men and 75 for women that retrogression is marked. A rise of 24 per cent for girls under 25 may appear alarming, but it must be remembered that this is a percentage of a small number. It has the effect of raising the death rate at that age from all causes by only 0.006 per thousand living.

A rise at ages above 75 has comparatively little significance, for doctors have for some time been discouraged from certifying old age as a cause of death. This category has rapidly diminished and the figures for all diseases of the aged have been correspondingly swelled. Moreover, the aged frequently suffer from a number of ailments simultaneously, and the allocation of the cause of death must necessarily be somewhat arbitrary in some cases. When cancer appears jointly with some other disease on a death certificate it is now generally given the preference.

It appears, then, that the only significant retrogression has been amongst men in late middle life. But this retrogression is more apparent than real owing to increased facilities for diagnosis, and may be entirely due to this. Against this there has been an improvement amongst men of 45-55 and women of 25-65, which is greater than it appears owing to more frequent diagnosis.

However this may be, it does not affect the important practical aspect that more cases of cancer are occurring and are being recognised, many of which are susceptible of curative or palliative treatment, and that the numbers are likely to go on increasing for many years, as the population in the age groups mainly affected increases and as the facilities for diagnosis progress.

Methods of Treatment

Research into the causes of cancer has unfortunately not proved so successful that the disease can be attacked preventively except as regards a few industrial processes known to cause cancer, but improved methods of diagnosis and treatment offer great possibilities of reducing the cancer mortality rate and of relieving much suffering from this disease. The increasing substitution of radium and X-ray therapy treatment for operative methods is particularly important. In the group of organs for which radiation is appropriate the results of such treatment, as compared with operative methods, differ with the organs treated; in some they equal or nearly equal those of operations, in others they surpass them, while incurable cases can obtain much relief. Another important psychological result of the existence of radium treatment is that patients are far less reluctant to seek treatment if they know that an operation will not be the only outcome.

The National Radium Trust and the Radium Commission

Although some hospitals possessed radium before 1929, since the establishment of the National Radium Trust and Radium Commission in that year, facilities for radium treatment have increased considerably. The Trust was appointed under a Charter of Incorporation to administer the funds raised as a thanksgiving for the recovery of King George V. These amounted to £250,000 in all, £150,000 being raised by public subscription and £100,000 voted by Parliament. This sum was sufficient to buy about 20 grammes of radium, which the Radium Sub-committee of the Committee of Civil Research estimated were necessary to meet the immediate requirements of the country.

The Chairman of the Trust is always the Lord President of the Council; the Minister of Health and the Secretary of State for Scotland are also members, besides a number of eminent medical men. The Commission, the function of which is to distribute the radium purchased, is a body of whom six members have special knowledge of the application of radium in the treatment of the sick. Both the Trust and the Commission must submit their accounts annually to the Treasury.

The Trust and Commission publish an annual report saying how much radium has been purchased during the year and what developments have taken place in the radium service of the country. In their seventh report the Trust stated that the need for more radium during the next few years cannot be met out of their present financial resources. It is not yet known what will be done to supplement these resources.

The main task of the Commission was to make arrangements for the distribution and use of the radium purchased by the Trust with the object of best providing for the treatment of the sick and the advancement of knowledge of the methods of rendering treatment. The Commission decided on a policy of concentration of radium in centres, so the first and main recipients of radium were 13 "National Centres" established at hospitals associated with medical schools. The geographical positions of these centres meant, however, that large areas remained unprovided with reasonable facilities so the National Centres were later supplemented by the formation of five "regional centres" in voluntary hospitals that were considered suitably situated and equipped for the purpose. Later still the Commission extended "recognition" to four hospitals in which radium treatment was already being provided out of their own resources under conditions which the Commission could approve. These have since become regional centres.

When the selected centres had stated their requirements, formal agreements were made with them concerning the details under which the national radium allocated to them was to be loaned and utilised. A rental charge was made to them to defray the expenses incurred by the Commission in connection with the loan, plus a fair proportion of the general administrative expenses of the Commission. Owing to the fact that the centres are widely dispersed, continuous efforts have been made by the Ministry of Health to encourage local authorities to provide transport and other facilities to enable persons living at a distance who suffer from cancer to benefit.

The Work of the Centres

The scope of the centres varies very much, but with one or two important exceptions their treatment appears to be limited to cases which occur among the populations normally seeking treatment at those hospitals for other diseases. In a few places co-operation between the centres and local authorities and voluntary bodies has resulted in the development of considerable facilities for diagnosis and "following up." In Wiltshire, for example, clinics for consultation and "follow up" work have been formed to facilitate treatment and to prevent possibly needless journeys to the centres. Arrangements have been made with the two nearest centres—at Bristol and Southampton—under which the radium officers periodically attend the clinics to give advice and the necessary cases are sent to the Bristol or Southampton centres for treatment. All the "following up" is done through the local clinics, treatment being given only at the centres.

In South-east Scotland a voluntary body, the Cancer Control Organisation for Edinburgh and South-east Scotland, has given considerable support to the National Centre by paying the cost of the statistical work of the "follow up" department, including the publication of results, as well as travelling expenses of patients when necessary. The co-operation between the centre and surrounding hospitals in South-east Scotland is also very satisfactory.

Apart from National Centres, some of the hospitals recognised by the Commission are also doing excellent work. Bradford is an example of what can be achieved by efficient collaboration. The Bradford Radium Institute is an organisation under the control of the Bradford New Royal Infirmary and of Bradford Municipal General Hospital, in both of which the treatment is given. There is a full-time medical officer appointed to carry out the radium work. The system of keeping in touch with patients in the area is also highly organised.

London, it should be mentioned, is specially provided for out of King Edward's Hospital Fund, and collaboration with the Commission has meant that records of treatment are available for the purposes of statistical investigation, which forms an important part of the Commission's work.

Facilities for the Prevention, Diagnosis and Treatment of Cancer

The preventive field of cancer still remains unfortunately rather limited, for there are only a few environmental conditions from which the disease is known to be likely to result. Most important in this respect are certain industrial processes which involve exposure to mineral oil, pitch, tar, soot, and similar substances. Measures to control these diseases are taken by the Home Office. Cancer due to such processes usually affects the skin, and epitheliomatous ulceration due to tar, pitch, bitumen, mineral oil, or any compound, product or residue of any of these substances, contracted in a factory or workshop, was in 1919 scheduled as a disease notifiable by medical practitioners under the Factory and Workshop Act 1901. Medical supervision of the workers in these processes is widely practised and should of course cover all those who might contract the disease. It has been observed that nearly all the occupations noted as of excessive skin cancer mortality record a cancer mortality for sites other than skin also in excess of average.

Facilities for the diagnosis and treatment of cancer have increased considerably during the last few years both as a result of the raising of special funds for the purpose and because of the excellent way in which the Trust and Commission have carried out their tasks. The efforts of many local authorities and voluntary organisations have also been shown to be most effective. The 1935 and 1936 Reports on the State of the Public Health show, however, that except in the London area, these facilities are not yet available in any appreciable degree except to the small proportion of the population which has "ready access" to the few hospitals where radium centres are installed, and the last report of the Radium Commission, published in 1937, endorses this statement by estimating that out of about 40,000 cancer cases which would benefit from radiation treatment, only about 8,000 are receiving it.

If these facilities are to be effectively increased, much closer co-operation between local authorities and the treatment centres is necessary. Local authorities should make every effort to carry out the suggestions of the Ministry of Health by making use of their existing health services for the early diagnosis and treatment of cancer as well as by increasing the means by which patients may take advantage of the facilities provided at the centres.

The provision of radiation treatment for the middle-class is another problem which needs consideration. At present some of the centres do not provide "pay beds" and, as the necessary radiation facilities are most unlikely to be available in nursing homes, members of the "middle-class" section of the community are in general unable to obtain the treatment unless they are willing and allowed to enter a hospital in the ordinary way.

When possible future developments of the radiation services are considered, the limits of centralisation must be realised. In the first place, centralisation puts a strain on people travelling long distances, and secondly there is the danger of the hospitals where centres are situated being over-burdened with cancer patients at the expense of their general functions. The possibility of equipping a number of hospitals on a less elaborate scale than the larger centres is discussed in the Report of the Chief Medical Officer of the Ministry of Health for 1935. It is suggested there that these hospitals might be used as "satellites" of the larger centres. This probably means that the radium officers from the centre could visit them to give instructions and advice, and cases for whom more elaborate treatment appears necessary could be sent to the centre where the necessary facilities are available. Between 50 and 60 hospitals have apparently already provided themselves with stocks of radium or X-ray apparatus, or both, which would enable them to participate in a scheme of this kind.

The establishment of more local consultation centres is also necessary to make the service more complete. In this respect developments on the lines of the Wiltshire experiment seem most desirable.

Whether the National Radium Trust and Radium Commission can form part of a lasting scheme for cancer control is difficult to say. Neither the Trust nor the Commission is necessarily a permanent body. The Trust was appointed to take charge of funds and the Commission to distribute the radium purchased by the Trust. Both appear to have fulfilled their functions admirably, but it must be remembered that radium is only one of the methods of treating cancer and that such methods as deep X-ray therapy and operation also play a very prominent part; indeed, the part of X-ray therapy is becoming increasingly important. Each of the three methods may, depending on the nature of the case, be used alone or in combination with one or both of the two others. It is possible, therefore, that considerable changes may occur in the organisation of the cancer services.

PROVISION FOR THE CARE OF CRIPPLES

Causes of Crippling

Crippling may be due to a number of causes. Some may be congenital or the result of accidents at birth. Some children develop deformity as a result of the neglect of the after-effects of infantile paralysis, rickets and tuberculosis. Other children and adults are crippled as a result of accidents sustained in the course of their work or play. Some of the problems connected with industrial accidents have been considered in Chapter III. It is unnecessary to emphasise again the high proportion of accidents among juveniles. The problem of the proper provision of fracture clinics is dealt with in both Chapter III and Chapter VIII, and it is shown that a large amount of crippling, which is due to inadequate facilities for fracture clinics and occupational therapy, is preventible.

With the increasing knowledge of the causes of tuberculosis and with the greater control which is now exercised over it the incidence of crippling from tuberculosis is undoubtedly being reduced. The incidence of rickets has also fallen; consequently its after-effects are being eliminated, but in Chapter XI we show that the incidence of rickets can be very considerably reduced by concentrating on improving the nutrition of children. Any other improvement in the nation's health, and particularly in that of children, will also reduce the incidence of crippling. Already a great deal has been done in this way with beneficial results.

If, however, children have developed deformities the majority of them can be cured by operative treatment. Even when either children or adult cripples cannot be completely cured, the provision of treatment and remedial training will often make them useful and sometimes self-supporting citizens. Training and treatment must, however, be closely related.

This close connection between training and treatment was realised in the first decade of the twentieth century by Sir Robert Jones, who was working as a surgeon at Liverpool, and his collaborators, the founders of the country orthopædic hospital at Baschurch, Oswestry, in Shropshire. As a result of the war great advances were made in the technique of treating physical defect both by operative and occupational methods, but some of these advances have not yet been utilised to the advantage of cripples in civilian life.

Incidence of Crippling

On March 31, 1936, there were 11,807 cripple children on the registers of special schools in England and Wales, out of an elementary school population of 5,308,000; that is 2.2 per thousand. These included children with tuberculosis of the bones and joints. However, in the L.C.C. area, where the provision for cripples is better than in most areas, there were 2,539 children at special schools in 1936 (including 639 with non-pulmonary tuberculosis) or 5.0 per thousand of all the elementary school children in London.

The proportion of children in special cripple schools varies widely in different areas. It depends on the facilities available, and is not a reliable index of the incidence of crippling. But the test of whether a child is able to attend an ordinary school is at least some standard. Otherwise it is practically impossible to define the point at which a physical disability should be regarded as crippling, and any attempt to estimate the total incidence of crippling must depend on the personal judgment of the persons making the estimate.

Estimates were made in three areas in 1933: Devon, Shropshire and adjoining counties, and Birmingham, where there are particularly good organisations for the care of cripples. These estimates included potential cripples, that is, those, mostly children, who needed immediate orthopædic treatment. They were as follows:

	per 1,000 at each age		
	Under 5	5-16	Over 16
Devon area	10.4	13.5	4.0
Shropshire area	10.3	13.0	2.9
Birmingham	6.8	6.2	3.1

In view of the necessary qualifications this material is not sufficient to justify the conclusion that the incidence of crippling is higher in rural than urban areas. But it does at least show that the children in special schools are only a fairly small proportion of those who may reasonably be regarded as cripples.

Local Authorities and Cripples

Local authorities in England and Wales who are welfare authorities for the purposes of Part VII of the Public Health Act 1936, or Part XIII of the Public Health (London) Act 1936, have power, subject to the general approval of the Minister, to make arrangements for the care of children who have not attained the age of 5 years and who are not being educated in schools recognised by the Board of Education. In pursuance of these powers they may provide treatment for non-tuberculosis cripples under 5 years of age at hospitals and clinics. Local education authorities must ascertain the numbers of physically defective children between the ages of 5-16 in their areas. To some extent this is done before the children reach school age, through the information from health visitors, school inquiry officers and social workers. These authorities must provide for the education of cripple children between 5-16. In England and Wales 254 local education authorities in 1936 also provided for the treatment of orthopædic and postural defects.

The Chief Medical Officer of the Board of Education in his Annual Report for 1935 states that an effective scheme of treatment should include an orthopædic clinic for examination, diagnosis, minor treatment, supervision, and after-care. There should be an expert orthopædic surgeon assisted by a trained orthopædic nurse on the staff. A scheme should also include a remedial exercise and massage clinic under a certified medical gymnast, hospital beds under an orthopædic surgeon for cases requiring only a short stay in hospital, and beds in an orthopædic hospital school under the same surgeon, who would also be responsible for the after-care of those needing treatment. A physical training organiser should be employed to organise corrective classes in the schools for early postural cases. All these institutions are rarely directly under the administration of the local education authority, for in a number of districts voluntary associations are carrying out this work. Some authorities combine to run joint clinics. In London and a few large towns there are special day schools to which cripples are brought by ambulance. Some authorities have residential schools near the sea or in the country to which they send children suffering from minor deformities for short periods in the summer. Local authorities for higher education also have power to send on children over 16 to special training centres, of which nine are provided by voluntary bodies approved by the Board of Education. Local authorities also provide hospital accommodation for orthopædic children and other cripples.

In Scotland cripples under the age of 5 come under the supervision of the local authorities responsible for the administration of maternity and child welfare schemes. Under Section 3 of the Education (Scotland) Act 1913, education authorities are required to provide medical (including surgical) treatment for school children in necessitous circumstances, provided that treatment is not available from voluntary sources. A local authority may also provide treatment, on payment, for children whose parents are not in necessitous circumstances. The additional responsibility recently placed on local authorities by Section 7 of the Education (Scotland) Act 1936, for the education, in schools or otherwise, of the physically defective children residing in their area, should result in extended provision being made for the care of cripples between the ages of 5 and 16.

Tubercular children come within the scope of the provision of local education authorities, but they are generally left to the tuberculosis authority. The Juvenile Advisory Boards of the Ministry of Labour co-operate with voluntary bodies to find employment for cripples, and Public Assistance Committees and the Unemployment Assistance Board sometimes pay for their training.

Voluntary Work

Local authorities only have power to make arrangements for adult cripples under their general power to provide hospitals for the sick. Consequently the work of placing, and where necessary providing skilled employment, rests almost entirely on the voluntary bodies.

Local voluntary associations have been created to organise the work for cripples in many areas. These associations are comparable to those organised for the blind, and like them they receive grants from local authorities. The Central Council for the Care of Cripples is responsible for co-ordinating all the work for cripples in Great Britain. It administers the Lord Nuffield Fund for Cripples which has recently been augmented by a further large gift from the same donor. With the aid of the Fund it has been able to establish local associations in many counties which had not previously possessed them. The work of the associations includes the ascertainment of those cripples who need help, their classification and the provision of treatment and work according to their conditions.

One large settlement and several small ones have been started for cripples who are never likely to be able to find a place in the community. The training centres previously mentioned are used by adult cripples. "Home training" is provided in a few cases for those unable to travel daily, by trained teachers. Industrial occupation centres have been established in some areas to give light work to those too handicapped to compete in the open market. Some cripples and some of those suffering from accidents need a course of reconditioning in light work before going back into industry. But at present this work is specially undertaken only at Crewe and is available only for the employees of the London, Midland & Scottish Railway. Their reconditioning is achieved partly by means of graduated exercises. This problem is closely related to the legislation governing Workmen's Compensation in this country. We have shown in Chapter III that there is no incentive, but rather the reverse, to encourage an injured workman to get fit. In many cases there is also no incentive to induce his employer to help him to do so by providing remedial employment.

Administrative Arrangements

It is generally held that special hospitals are needed for orthopædic cases, since patients may have to stay in hospital for a considerable time. Open-air treatment is essential and suitable surroundings are necessary. Special schools can also be combined with the hospitals to give ordinary education and vocational training. A considerable amount of orthopædic surgery is also carried out in voluntary and public general hospitals.

An essential feature of any organisation for the care of cripples is that it should be on a regional basis. The scheme which covers Shropshire, Herefordshire, Cheshire and four Welsh counties is exceptionally large. It is served by the Robert Jones and Agnes Hunt Orthopædic Hospital at Baschurch, near Oswestry. This provides for the teaching and training of orthopædic children and has 320 beds. It is linked to clinics throughout the counties served, which are visited by the orthopædic surgeon and the orthopædic after-care sister from the hospital. The Wingfield Morris Orthopædic Hospital at Headington, near Oxford, is also the centre of a regional scheme.

Conclusion

It is essential that a co-ordinated service should be created where it does not exist, and the smooth working of the schemes of the voluntary and public bodies preserved. Further, collaboration must be promoted between the new fracture clinics which will probably be created in general hospitals in response to public demand and the schemes for helping cripples. The growth of accidents, particularly road and industrial accidents, and the failure of both voluntary and public hospitals to provide an adequate fracture service, have probably led to the growth of the number of crippled adults in the community and therefore to a greater need for their care. The problem of the placing of cripples and partially crippled persons in profitable employment must be worked out with the collaboration of the hospitals and clinics, local authorities and industrialists. The problem is part of the much wider problem discussed in Chapter III concerning the selection of persons in industry.

THE WELFARE OF THE BLIND

In the eighteenth century and earlier the welfare of the blind was largely an affair of private charity. Eventually, at the end of the eighteenth century, the first school for the blind was founded at Liverpool. By the middle of the nineteenth century most of the workshops for the blind now in existence had been opened. At length, in 1891 in Scotland and in 1893 in England and Wales, Parliament made education compulsory for all blind persons between the ages of 5 and 16. Then, in 1920, the Blind Persons Act gave central cohesion to the system, and made the blind the only handicapped class of persons in the community who are specifically entitled to receive benefit in their homes apart from the poor law.

Incidence and causes of Blindness

The total number of registered blind persons in Great Britain was 76,034 on March 31, 1936, of whom 219 were under 5 years of age, 2,052 between 5 and 16, 10,875 between 16 and 40 years of age, 37,995 between 40 and 70 and 24,903 over 70 years of age. Thus nearly one-third of the registered blind are over 70.

Blindness is sometimes due to infection at birth, sometimes congenital, and sometimes brought on as a result of severe illnesses and accidents in childhood. Some blindness is the outcome of occupational diseases such as miners' nystagmus and industrial accidents. Improved medical services and greater care of the eyes by the public will help to reduce the incidence of blindness.

The State and Local Government Service

The Blind Persons Act 1920, which applies to Great Britain, imposes on county councils, county borough councils and the corresponding authorities in Scotland the duties of securing the registration of the blind and of preparing minimum schemes for the welfare of the blind. The Act was designed to empower the local authorities to supplement, but not in any way supersede, the work of the voluntary bodies. Further, its purpose was to take the administration of assistance to the blind away from the poor law service. But some local authorities, particularly in rural areas, still fail, despite the special encouragement in the 1929 Local Government Act, to differentiate between the domiciliary financial assistance they give under the Blind Persons Act and other finanical assistance to the blind who are unemployable given under the poor law. Consequently, a Bill is now before Parliament to compel reluctant authorities to make this distinction. The Blind Persons Act further provided in Section 1, which has been repeated and re-enacted in the Old Age Pensions Act 1936, that in the case of blind persons the qualifying age for old age pension should be reduced from 70 to 50. Under the Bill to which reference has been made it is now proposed to reduce the age from 50 to 40.

The local authorities' schemes for blind welfare usually provide for the care of the blind children under school age, and the provision of employment for the blind in workshops and through homeworkers' schemes, home teaching and general social welfare. The home teaching includes instructing the blind in reading Braille or Moon type and in handicrafts to occupy their leisure. In England and Wales homeworkers' schemes are in some cases attached to the workshops, and their products marketed together. In Scotland homeworkers' schemes, which provide for a comparatively small number of workers, are usually administered by the voluntary societies for the blind. The trades practised by blind workers include basket making, brush making, mat making and other handicrafts. Earnings are supplemented by a payment known as "an augmentation" designed to bring wages to the level that would have been earned if the individual had not been blind. In London "augmentation" is paid at the flat rate of 15s. per week per worker. The majority of the local authorities devolve their duties, including that of registration and rendering domiciliary financial assistance, upon voluntary bodies to whom they make a grant. Some of these bodies do only specific work such as home teaching, but about 100 provide all the statutory services. Other local authorities in England and Wales have chosen to administer either all or part of the blind welfare service direct. In Scotland, also, the services of the voluntary agencies are extensively used by local authorities who, however, administer their own schemes of domiciliary assistance, and in a number of cases prepare and maintain their own registers. The administration of the service is carried out by the blind welfare committee of the local authority or any standing committee invested with the powers of the authority under the Blind

Persons Act. Owing to the varying financial resources of the different authorities the standard of the services and particularly the rates of domiciliary financial assistance to blind persons vary throughout the country. The Ministry of Health or the Department of Health for Scotland have to approve the schemes. Both central departments have an advisory committee on the welfare of the blind. Other legislation concerning the blind includes the Post Office Act 1908, under which special postal rates are charged for literature and apparatus for the blind, the Wireless Telegraphy (Facilities) Act 1926, under which all registered blind persons are exempted from the payment of wireless licences, and the Blind Voters Act 1933.

Under the Public Health Act 1936, which applies only to England and Wales outside London, local authorities may take action for the prevention of blindness, and some authorities are making use of their powers. For example, they provide spectacles and hospital treatment free, and some have established sight saving clinics. Regulations are also made in connection with maternity and child welfare services for the notification and treatment of ophthalmia neonatorum, and cases of total blindness due to this cause are becoming increasingly rare.

Education

The local education authorities are responsible for the education of blind children and all whose sight does not permit them to attend ordinary schools, and they either maintain day-schools for them, or pay for their education in residential schools provided by voluntary bodies. Education authorities may continue their educational provision for blind persons beyond the age of 16. In Scotland the Education (Scotland) Act 1918, requires local authorities to provide education to blind children up to the age of 18, and in 1936 the lower limit was reduced to three. On March 31, 1936, there were 44 day and 27 boarding-schools in England and Wales for blind and partly sighted children, with 1,976 and 1,590 children on their registers respectively. In Scotland there were five residential schools, two of which also admitted deaf pupils, one day-school and three special classes; the number of pupils was 238. These figures do not include those of the sight-saving classes. Provision for the secondary education of blind children is made in four schools in Great Britain. The Board of Education assists the local authorities in this work by making a grant of £16 10s. 0d. a head for blind children in residential schools and £8 10s. 0d. for blind children in day-schools. In Scotland the grant is paid on the approved expenditure of education authorities by the Scottish Education Department.

Cost

The total expenditure of the local authorities in England and Wales, under the Blind Persons Act 1920, in 1935-6 was £1,093,691. The figure for Scotland was £115,766 in 1933-4. To this figure must be added the amounts expended under the poor law by local authorities, who grant assistance under those powers and not under the Blind Persons Act. This expenditure is met partly from local rates and partly from block grants. In England and Wales a further £558,000 was spent on old age pensions for blind persons aged 50-70, and £76,000 (1936) in Scotland. In Scotland the education authorities spent £8,314 in 1935-6 on the technical education of the blind under the

Blind Persons Act, and the conveyance and maintenance of the blind and deaf mute children together cost the education authorities £30,938.

Voluntary Work

Voluntary bodies, as has already been seen, still play an extremely important part in providing the blind services in this country. Under the Blind Persons Acts voluntary bodies for the promotion of the welfare of the blind have to be registered as charities for the blind. In England the National Institute for the Blind is the chief national organisation for the blind. In addition to printing books and periodicals in Braille and Moon type, it does research work on all aspects of education and employment. It has homes for blind babies, for blind children, a college for girls with little or no sight, and convalescent and holiday homes. It receives a grant from local authorities for book production and for the maintenance of inmates in its homes. The rest of its activities are supported by voluntary contributions. The National Library for the Blind, with nearly 14,000 readers, and the "Wireless for the Blind Fund," perform essential services. The College of Teachers of the Blind is a professional body which conducts examinations for the purpose of qualifying teachers of the blind. The Association of Workshops for the Blind is concerned with questions affecting the employment of the blind. St. Dunstan's Organisation for Blinded Soldiers, Sailors and Airmen carries out a specific service for men blind as a result of war service.

As has already been shown, local voluntary associations perform local services for the blind in most parts of Great Britain. As a result of action taken recently by the County Councils Association and the Association of Municipal Corporations, local societies are now being grouped into regional associations which will be represented, together with a number of other bodies and the local authorities themselves, on the Council of the National Institute for the Blind.

The following figures show the occupation of the blind persons who are employed or being trained for employment in England and Wales:

3,565	employed in special workshops for the blind.
1,828	home workers, i.e. fully-trained workers carrying on their occupations outside workshops, but organised under some schemes specially designed for their employment.
3,393	engaged in miscellaneous pursuits.
62	receiving secondary education.
49	at colleges or universities; and
1,148	under training for industrial employment.
10,045	

The above may be further analysed as follows:

44	clergymen.
34	school teachers.
105	home teachers and visitors.
214	musicians and teachers of music.
169	masseurs.
136	clerks and typists.
123	telephone operators.

633	dealers, tea agents and shopkeepers.
217	poultry farmers.
69	porters, packers and cleaners.
107	carpenters and woodworkers.
36	machinists and upholsterers.
914	machine knitters.
351	chair re-seaters.
103	mattress makers.
741	mat makers.
622	brush makers.
1,547	basket makers.
221	general agents, including financial organisers employed by voluntary institutions.
590	pianoforte tuners.
443	miscellaneous occupations.
2,626	other occupations, training and education.
10,045	

THE DEAF AND THE DEAF AND DUMB

The deaf and "the deaf and dumb" suffer from a disability which has not the same economic disadvantages as blindness, although it may be as socially disastrous, for deaf persons and even "deaf and dumb" persons can engage in numerous occupations. Mainly for this reason there has been no national Act comparable to the Blind Persons Act and the supervision of their welfare is left primarily to voluntary organisation. Nevertheless there has been pressure for such an Act and in 1930 Dr. Eichholz was appointed by the Minister of Health and the President of the Board of Education to conduct a general survey of the deaf and "the deaf and dumb" in England and Wales.

Incidence of Deafness

Dr. Eichholz estimated that there were in 1932 about 38,000 deaf mute (or "deaf and dumb") persons in Great Britain. He also estimated that there were 2,803 blind deaf in England and Wales. There are no returns stating the number of people who suffer from deafness only. The deaf mute is probably born deaf. Others lose their hearing as a result of ear disease in early infancy and are almost deaf mutes. There are the partially deaf who suffer from diseases of the middle or internal ear. The incidence of deafness also increases greatly in the higher age groups of the population. Deafness is, of course, caused to a very large degree in childhood by infectious diseases. Deaf mutism and born deafness is often hereditary and has in some cases a connection with venereal disease. Industrial conditions account for some deafness.

The Annual Report of the Chief Medical Officer to the Board of Education for 1935 shows that 0.28 per cent of the children examined at routine examinations had defective hearing. It is suspected that more accurate tests would reveal a higher incidence since, for example, an examination with the audiometer of 2,994 unselected L.C.C. school children showed that 8.3 per cent had defective hearing, and of 2,000 at Tottenham 6.7 per cent. It is also known that in 1928 5.6 per cent of prospective recruits for the Army (including those who had served six months) were rejected for defective hearing. For the R.A.F. the figure was 2 per cent.

Statutory Provision

Since 1893 in England and Wales education authorities have had to make adequate provision for the education of deaf children between the ages of 7 and 16. The age limit is now 5. Provision has been made for the payment by local authorities for the education of deaf children in institutions other than their own. If a child goes to a residential institution the parents may be asked to contribute towards its maintenance. The local education authorities may, if the provisions of the Education Act of 1921 are put into force, make provision for the education of the deaf after the age of 16, but this at the moment is only provided in evening classes and technical institutions. The Board of Education makes grants both to local authorities and to other bodies concerned in the education of the deaf. In 1936 there were 28 special day-schools for the deaf and 7 special boarding-schools maintained by the local authorities. There were also 12 boarding-schools maintained by voluntary bodies. The average number on the registers of all these schools in 1935-36 was 3,613.

In Scotland provision is made for the deaf between the ages of 5-18 and special education can be provided for deaf children after the age of 3. In Scotland in 1935-36 there were five residential schools for deaf mutes, two in which both blind and deaf children were accommodated, and four special day-schools for deaf pupils. There were 704 deaf mutes in these schools. Four of the schools were run by voluntary bodies.

In England and Wales local authorities, under the Poor Law Act 1930, may maintain any adult who is deaf and dumb in a special institution. They may also make grants towards the maintenance of this kind of institution. Dr. Eichholz computed that 1 in 13 of the "deaf and dumb" population was in receipt of poor relief and that this was true of only 1 in 32 of the whole population. As a result of Dr. Eichholz's report a circular was issued in 1933 reminding local authorities of their powers and duties towards the deaf.

In the financial year ending March 31, 1937, local authorities in England and Wales allocated in the aggregate £4,057 to societies and missions for the deaf and dumb. A special agreement has been made between the Royal Association for the Deaf and Dumb and the county councils of London, Middlesex, Surrey and Essex and the county borough councils of Croydon, East Ham, West Ham and Southend to secure the proper placements of deaf and dumb persons, for which the association receives £1,000.

Voluntary Provision

The above account indicates that necessarily the chief work of providing both for the deaf and for the "deaf and dumb" falls on voluntary bodies. The National Institute for the Deaf is an organisation which tries to co-ordinate the activities of all the bodies working for the deaf and the deaf and dumb. There is also the National College of Teachers of the Deaf. There are hospitals, hostels, homes and schools for the deaf. Beyond the confines of institutions some amenities are provided by the missions to the deaf. These are primarily religious in aim and nearly always denominational. The largest is the Royal Association in aid of the Deaf and Dumb, which works in the London area and in the home counties. It provides cinema displays, social activities of all sorts, lectures by finger spelling, mothers' meetings and thrift clubs. Most important, perhaps, it attempts to find employment for deaf persons.

Improvements

The Eichholz report* which was published in 1932 recommended more stringent methods of detecting any aural disease by local maternity and child welfare and education authorities, and that research should be under taken into the causes of deafness. The report also emphasised the need for inquiries into the method of educating the deaf and dumb, the need for increased effort to secure early admission to schools for the deaf and dumb and the further provision of vocational training, and a proper classification of deaf children. The necessity for making special efforts to relieve the condition of the blind deaf was urged. Financial help, it was asserted, should be given by the public assistance authorities to enable special placements to be made for the deaf and dumb; and co-ordination of the organisations engaged in assisting the deaf and dumb should be arranged. The National Institute for the Deaf advocate further measures including the construction of a National Scheme for the deaf comparable to that for the blind, and the prevention of the exploitation of the deaf by the sale of medicines and appliances of no value, particularly through the suppression of misleading advertisements.

* 'Study of the Deaf in England and Wales,' by G. D. Eichholz. H.M.S.O. 1932.

X. RESEARCH AND GENETICS

Medical Research: The Medical Research Council—Other Government-controlled Research—Unofficial Bodies—Problems of Medical Research Policy—**Genetics and Public Health:** Introduction—Inherited Defects—Sterilisation—Need for Research.

The first section of this chapter gives a very brief account of the provision for medical research, many other references to which also occur at the appropriate points in the report. The second part gives an equally summary outline of the bearing of research in genetics upon public health policy.

MEDICAL RESEARCH

The Medical Research Council

The first British central organisation for medical research was a committee set up in 1914 under the Joint Committee for National Health Insurance. In 1919, when the Ministry of Health was created, the responsible body became the Committee of the Privy Council for Medical Research, and therefore avoided restriction of its activities within the national boundaries limiting the central departments concerned with health. It also secured freedom from departmental barriers separating the administration of, for example, health in factories from health in schools and health in local communities. The Medical Research Council, incorporated by Charter, works under the direction of this committee, which is composed of ministers acting *ex officio* and has more or less formal duties.

The Council, with a grant-in-aid (1937-38) of £195,000, has a central London office and is assisted by a series of investigation committees for special subjects such as human nutrition, vision, hearing, human genetics, statistics, anæsthetics, radiology, therapeutic trials of new remedies, dental disease, tuberculosis, mental disorders, and bed-bug infestation. These committees, of which there are now 21, direct and co-ordinate British medical research on their various subjects. Several of them are run jointly with other bodies—for instance, the Committee for Tuberculosis is joint with the Agricultural Research Council, and that for Radiology is joint with the British Empire Cancer Campaign. The smallest committees have six members, but most have around a dozen. The secretary is in several cases on the staff of the Medical Research Council.

The Council has a small central staff, its total administrative cost being not much more than £10,000. In 1937-38 it allocated rather more than £65,000 to cover the expenses of the National Institute for Medical Research which it maintains at Hampstead, and of the associated farm laboratories at Mill Hill, including salaries and expenses of the scientific staff. Its remaining expenditure, totalling just over £100,000, was devoted to grants, salaries and expenses for scientific work, including statistical inquiries and the investigations of the Industrial Health Research Board. This Board is a subsidiary organisation of the Council, and shares the same headquarters. It has its own staff and its own governing body appointed by the Council, and it carries out a large number of investigations not only upon the nature and physical causes of such conditions as silicosis, but also into the physiology of muscular work, environmental factors such as heating and ventilation, noise and lighting, and such human problems as vocational guidance, boredom resulting from repetitive work, and accident proneness.

Owing largely to the efforts of a few outstanding men who have been connected with it, the British organisation for medical research has developed into a notable example of national planning in the health services, with important international ramifications and results. Broadly speaking, the Medical Research Council and the Industrial Health Research Board, through their investigation committees, keep under review the most important fields of research on medical and related subjects, and either themselves conduct or cause to be conducted by others such studies as seem likely to clear up the problems brought to light. The research centres at which work is done include many hospitals in Great Britain, and also universities and colleges, and independent research stations.

Other Government-controlled Research

The Ministry of Health and the Department of Health for Scotland also have research departments whose relations with the Medical Research Council are defined by an agreement drawn up on Treasury initiative. This allocates to the Ministry and the Department the duty of undertaking research for the purposes of day to day application, especially of an administrative nature, while leaving to the Medical Research Council the organisation of research and the promotion of basic researches. It is impracticable to specify here the various arrangements which exist for liaison between the various branches of Government concerned with research, but some indication must be given of the type of work done by some of the leading agencies other than the Medical Research Council.

"Short-term" research work is carried out by the Ministry of Health. For example, inquiries by committees in 1935 were conducted into the causation and prevalence of cancer, immunisation and the eradication of bed-bugs. Financial grants are made to individual research workers for factual investigations. The Ministry's pathological laboratory also does a certain amount of research work. The Ministry's investigations into such problems as maternal mortality are well known examples of its research activities. Some of the advisory committees of the Ministry, notably the Advisory Committee on Nutrition, either carry out or initiate valuable research work.

The Ministry of Health also co-operates with the League of Nations in international investigations. The Ministry publishes a series of special reports on medical and public health subjects. Much valuable research work is conducted by the medical officers of health to the local authorities in connection with the local incidence of disease.

A special feature of the research work of the Department of Health for Scotland is the organisation of research into disease amongst insured persons, and for this purpose insurance practitioners are required to keep a record of relevant cases coming to their notice. The inquiries so far undertaken have been into the early symptomatology of cardiac diseases and into valvular cardiac disease. The next inquiry is to be concerned with chronic incapacity. The medical branch of the Board of Education, like the Ministry of Health, conducts research work both centrally and locally. The Board of Control receive reports on the research work carried out in the mental hospitals and institutions under their supervision and publishes summaries in its annual report.

Unofficial Bodies

A great deal of British medical research work is carried out in the medical schools attached to voluntary hospitals and in the British Post-Graduate Medical School connected with the Hammersmith Public Hospital. The financial assistance of the Government was obtained by the L.C.C. towards the cost of erecting this medical school. Other medical schools only receive Government assistance through the University Grants Committee and the grants of the Medical Research Council. They rely for their financial support mainly on the beneficence of rich donors. The most conspicuous recent example of this has been Lord Nuffield's gift of £2 millions to Oxford University for medical research and post-graduate teaching. Similar work is carried on in the specialist voluntary hospitals such as the Royal Cancer Hospital. At all hospitals research is constantly going on, both in special problems and by the collection of records of cases.

Some institutions have been specially set up to promote particular aspects of medical research such as the London School of Hygiene and Tropical Medicine, which does valuable studies in preventive medicine and in public health, the Lister Institute of Preventive Medicine, and the James Mackenzie Research Institute for Clinical Research, founded at St. Andrews for the purpose of constructing continuous health histories from birth onwards and thus investigating the beginnings of disease and the mechanism of symptoms.

Several organisations are devoted to research on a particular disease. For example, the British Empire Cancer Campaign was founded in 1923 as the result of a public appeal made under the auspices of the British Red Cross Society. The objects of the campaign are to finance cancer research, to co-ordinate and disseminate knowledge about cancer, and to educate the public on the subject. Branches of the campaign have been established in various parts of the country, and branches or affiliated organisations also exist in the Dominions and Colonies.

The Imperial Cancer Research Fund was founded in 1902 by the joint action of the Royal Colleges of Physicians and Surgeons for the purpose of assisting the development and extension of the experimental methods in the study of cancer. Scientific reports on its investigations are issued by the Fund from time to time.

The Asthma Research Council was founded in 1927 for the purpose of promoting research on asthma and allied disorders. The Council uses funds received from the general public for the remuneration of qualified workers, who publish their results in the medical Press. The Honorary Medical Advisory Committee at the same time keeps itself informed concerning investigations in asthma which are being carried out by other workers at home and abroad.

The Empire Rheumatism Council was founded in 1936 to organise research throughout the British Empire into the causes and means of treatment of rheumatic diseases.

The Joint Tuberculosis Council was founded in 1922 for the purpose of exploring the present position of the tuberculosis service, and to make suggestions for improvement of the service and in the training of medical officers for the tuberculosis service.

Professional medical organisations also contribute to research. For example, the British Medical Association appoint special committees from time to time to investigate particular problems, and the Royal College of Surgeons maintain an institute for surgical and biological research at Downe, Kent.

The Rockefeller Foundation annually awards fellowships and at different times it has given great assistance towards particular causes. For example, in 1935 the L.C.C. accepted its offer of £3,000 a year for three years to pay the salaries of five psychiatric research workers at Maudsley Hospital in the scientific investigation into mental illness. Again in 1935, it offered £120,000 to the National Hospital for Diseases of the Nervous System, Queen Square, towards the cost of a new building to house an institute for the teaching and study of neurology, on the understanding that the balance of £120,000 be raised in two years. If that condition is fulfilled, a further £60,000 is to be given for research work and the upkeep of the new premises.

Numerous scholarships and prizes are available to medical practitioners who wish to investigate some particular problem. Members of professional societies also contribute to medical research, for the papers read at their periodical meetings all add to the sum of medical knowledge.

Problems of Medical Research Policy

The above account is far from exhaustive and is intended only to indicate the many different agencies interested in medical research and the type of work done by some of them. It remains to refer very briefly to some of the main problems arising.

Clinical research has in the past been closely linked to specialised practice. In surgery, which is an art as well as a science, this is inevitable. But in some branches the function of the medical research worker and the practitioner can be separated with advantage. Medical practice and research have been yoked together partly by the fact that the rewards of the research worker were negligible. Measures have, however, lately been taken to secure for whole-time research workers salaries making it worth their while to forgo the rewards of private practice. The Medical Research Council have sought with some success to secure an increase in senior posts for whole-time work and higher teaching, and thus stop the drift of young research workers into private practice. Special clinical research units have been created by the Council in leading London hospitals (referred to in Chapter V). This policy is also being pursued by the Nuffield Trustees at Oxford. Nevertheless, there is little, except love of the work, to tempt the brilliant student to devote himself to medical research once he has graduated. There is also still too little provision in some branches for the recruitment and training of research workers, although considerable numbers of scholarships and research grants are given.

The results of medical research are passed on to the students in the medical schools and to others through the specialised journals, but it is almost impossible for a general practitioner to keep up with the latest research work. However, the development of post-graduate courses and the allocation of funds by the Ministry of Health and by the Department of Health for Scotland to enable panel practitioners to attend courses, will facilitate the spread of knowledge about research results. As has been pointed out in Chapter III, the findings of research workers in the field of industrial health are not implemented or even studied by industrialists, partly because the Industrial Health Research Board is precluded from popularising its findings by the risk of becoming involved in controversy to an extent which might impair its neutral and detached position.

In spite of a number of weaknesses, medical research is probably on the whole more comprehensive, better planned and organised, better manned and better supported financially than any other major class of research in Great Britain, apart from research in connection with defence. It has the great advantages of a vigorous tradition of leadership and team work, and a high standard of personnel in many branches. It is particularly strong on fundamental problems in physiology and pathology, but although a broad view is taken far more work is necessary upon the economic, social, psychological and population problems out of which so much unfitness arises. The additional research most needed is not purely medical, but is of a mixed and applied nature largely falling within the province of the Ministry of Health and the Department of Health for Scotland. These departments have recently done some excellent work of this type, for example, in investigating the causes of maternal mortality in England and Wales in relation to social conditions and in tracing the incidence of diseases among insured persons in Scotland. There is room for a great expansion of this type of work, which bridges the gap between the laboratory and everyday life.

An equally serious weakness of medical research is the absence of a public relations mechanism for making the public, including such special groups as factory employers and workers, aware of the gist of the many valuable discoveries waiting to be turned to good account. Research touching on broad human problems which is buried in little-read technical reports might almost as well not be done at all. The Medical Research Council raised the question in its Report for 1934-35, but there still exists nothing like adequate provision for informing the public in intelligible terms of health discoveries which vitally concern them and which have largely been made with public money. When full allowance has been made for matters on which only the medical profession need be informed, and for differences of opinion about the most suitable agency of information, it remains plain that somebody ought to be telling the public a great deal about health which no one is telling them at present.

GENETICS AND PUBLIC HEALTH

Introduction

Although it has long been known that heredity plays an important part in the creation of a healthy and well-endowed stock of any species of animal or plant, and although men have applied this knowledge with conspicuous results to many forms of life, they have usually been reluctant to apply the principle to themselves. Undoubtedly the difficulties of a practical use of genetics in a national health policy are substantial and the resistances strong, but the issue is so important that it cannot be ignored. It is often assumed that the choice is one between interfering with nature and not interfering with nature, but this is an evident fallacy. Interference in any case takes place on a vast scale: the real questions are whether it shall be conscious and open or disguised and largely unrecognised, and whether it shall be directed to the improvement of the race or left to work sometimes for improvement and sometimes for deterioration.

The hereditary constitution of the British people is subject to a continuous process of change. Successive waves of immigrants have repeatedly modified it. The recent substantial transference of Welsh and north-country families to the Midlands and South-east, and the immigration of refugees from Germany and elsewhere are contemporary instances of a process going back in England through the Scots and Irish, the Huguenots, the Flemings, the Normans and so forth, into pre-history. At the same time, emigration to the Empire, the United States and elsewhere has taken a selective toll, and has modified the population left in the mother country.

While migration movements have been in evidence thoughout our history, they have been specially active during the last century. In that century other movements also began to take place on a large scale, due to the increasing opportunities for social mobility. A large and prosperous middle class arose which was largely recruited from the more successful elements among the wage-earning and small-farming classes. This movement is continuing and it is worthy of note that it is being increasingly guided and conditioned by the scholarship system and by the tendency to exact tests for entrance to the professions and to other better paid occupations. While there is no decisive evidence that qualities desirable either genetically or on any other grounds as yet preponderate in one class or income group, it is clear that there are now powerful forces tending to concentrate certain desirable qualities in certain occupational classes. At the same time, owing chiefly to the modern practice of contraception, the members of these classes have on the average smaller families than the population as a whole—a situation which if it persists must in time lead to a deterioration in the hereditary endowment of our people.

It has sometimes been suggested that the health services themselves tend to lower the quality of the population by saving genetically unfit lives, which would otherwise have terminated at an early age. It is hard to say whether this argument is valid, because the health services probably save many genetically desirable as well as undesirable lives. The fittest child cannot be deprived of the help of the health services any more than the hardiest traveller in the tropics can afford to be without quinine. Moreover, we cannot draw a hard-and-fast line between "good" and "bad" stock, and recent advances through improved nutrition and environmental services have shown what striking results can be obtained with apparently poor material.

Enough has been said to indicate that decisions are constantly being taken which substantially influence the future health and endowment of the population, without sufficient knowledge of or reference to the possible effects of these decisions. The question therefore arises whether it is possible and desirable, as a part of a national health policy, to do anything to improve the future composition of the British population. The question at once raises others. Can anything be done to secure a better stock, or must we limit ourselves at most to attempting to eliminate "bad" stock in whole or in part? What part can the State play, either by compulsion or by persuasion, and what part must be left to voluntary effort? This Report cannot pretend to deal fully with these questions, but they must be briefly discussed.

Evidently a constructive population policy presupposes both a decision on the types which it is desired to encourage, and the necessary knowledge and power to act upon such a decision. None of these conditions can at present be fulfilled, and any State action is clearly impossible. There is, however, a need for intensified voluntary efforts, both in propaganda and education and in research, such as are being carried on by the Eugenics Society.

It is much easier to ascertain, and secure agreed and effective action upon, types of stock which it is desirable to discourage from reproducing themselves. The problem falls into three parts—to determine what defects are hereditary, to determine the incidence and trend of these defects, and to frame a policy for reducing their incidence.

Inherited Defects

Some bodily defects and abnormalities, such as club foot and supernumerary fingers, are well known to be hereditary. More serious conditions include congenital blindness, congenital colour blindness and congenital deafness, hæmophilia (bleeder's disease), some forms of diabetes and some abnormalities of the nervous system. Some forms of cretinism, which is due to a lack of secretion from the thyroid gland, may be familial. The Committee on the Scottish Health Services also stated that "there is probably a considerable amount of inherent weakness of constitution running in families which has a definite effect upon the fitness of individuals and through them on the fitness of the community as a whole."

In regard to mental disorders, it is established that "heredity plays a large part in their causation,"* but in varying degrees. Some forms are definitely hereditary, such as dementia præcox and manic-depressive insanity. "Psychopathic parents tend to have psychopathic children,"* but many other factors help to cause mental disorders. The Departmental Committee on Sterilisation summarised its relevant conclusions in regard to mental defect as follows:

(1) In many cases of mental defect there exists in the family some form of mental abnormality, i.e. insanity, psycho-neurosis, epilepsy, defect or dullness. In the majority of such cases there is evidence of heredity, but the mode of transmission is at present unknown.

(2) In the case of certain rare forms of defect, not only is the fact of hereditary transmission known, but the method of transmission has been demonstrated.

(3) It is probable that some mental defect is determined by a combination of genetic and environmental factors.

(4) Some mental defect is not inherited, i.e. the defect is acquired after conception as a result of environmental causes. There is no evidence that such defect is transmissible to subsequent generations.

In both mental disorders and mental defect the interplay of both hereditary and environmental factors is extremely important and it is difficult to dissociate their effects.

---

* Report of the Departmental Committee on Sterilisation, December, 1933.

Syphilis causes general paralysis of the insane and is responsible for a certain amount of mental defect. In the case of mental defect the opinions of the Departmental Committee are summarised in the following paragraph:

"High grade mental defect occurs proportionately more frequently in the lowest social stratum than in the rest of the population. In this stratum there appears to be an unduly high incidence of mental defect, insanity, intellectual dullness, and epilepsy, as well as tuberculosis and other physical defects. Cause and effect of the conditions found in the social problem group are debatable, but it is possible that selective mating may to a large extent account for this concentration of physical defects and mental defects and disorders. There is evidence that in the poorest districts neighbour marries neighbour, and like marries like."

The incidence and trend of inborn defects is very imperfectly known in Great Britain at the present time. It is often assumed that while the upper and middle classes are of relatively low fertility, criminals and mental defectives show exceptionally high fertility rates. This is probably untrue: available evidence goes to show that actual criminals and defectives are, like the professional classes, below the average in fertility. On the other hand, defectives often spring from stocks of low income and social grade, which are exceptionally fertile. Professor A. M. Carr-Saunders and Mr. D. Caradog Jones, in the revised second edition of their 'Social Structure of England and Wales' (1937), accept the finding of the Wood Committee (discussed in Chapter IX) that the incidence of mental defect in England and Wales has increased during the past generation, although it has probably not doubled. They point to the existence of a class of some hundreds of thousands, by no means all mentally defective, who, in the words of a Board of Education Report, are adding "50,000 recruits to our industrial army every year who are not only unprepared by mental retardation to meet effectually the demands of a full life, but who furnish society with the bulk of its inefficient adults—criminals, paupers, mendicants and unemployables. . . ." These authors point out that account must be taken, not only of inborn intelligence, but of temperament and physique, and "therefore the general trend may not be in the direction of biological degeneration." They emphasise the need for inquiry, in view of the changes which may be caused in a comparatively short period.

Sterilisation

In Chapter IV on Maternity and Child Welfare we have referred to the need for more birth control instruction, but as birth control demands a sense of responsibility and some skill, and is not infallible, it cannot be regarded as a method of restricting the reproduction of the unfit. Both in Great Britain and abroad legislation to enable unfit persons to become legally sterilised is accordingly much canvassed. In some countries, particularly the U.S.A., laws to this effect have been in existence for a considerable time. The Departmental Committee on Sterilisation in 1933, after a very thorough consideration of the case, recommended that legislation should be introduced to make legal the voluntary sterilisation of persons with a definite hereditary disease or defect, and they also considered that with very strict safeguards this legislation should be extended to "carriers" of these diseases. They were particularly struck with the unanimity of the witnesses they examined. They were convinced that the principle that an increase in the undesirable stock in the nation should be checked was sound. In regard to mental cases also they considered that there was no justification for allowing children to be born to parents who could not provide them with the barest decencies of home life.

They found that the surgical operations involved were not dangerous nor their effects harmful. But they were opposed to any kind of compulsion, since it generally defeats its own end, and would certainly tend to "drive mental defect underground" by making parents reluctant to send their children to special institutions. The Committee considered that voluntary sterilisation should not be confined to mental sufferers, since the general principle on which the case for it rests is equally applicable to the transmission of any hereditary defect, and it would attach an unfortunate stigma to all mental diseases and deficiency. They considered that the general principle also applied to the case of "carriers." It was hoped that by making the permission applicable to carriers the increase of defectives in the lowest social stratum might be checked.

The Committee demanded the creation of stringent safeguards before an operation was performed. Two medical recommendations should be required, one from the patient's family doctor, the other from a doctor on the "approved" list at the central department. No operation should be performed without the Minister's written consent, and this should be given after consultation in doubtful cases with an advisory committee. Again, to avoid any connection in the public mind between entry to mental hospitals or mental deficiency institutions and surgical operations, the operation should be performed in an ordinary hospital. Except in the case of persons able to pay, the cost of the operation should, the Committee thought, fall on the local authority.

The Committee's Report has not yet been implemented and there are certain difficulties in the way. One of these is the lack of medical authorities sufficiently qualified by a knowledge of genetics to administer such a system scientifically. This difficulty might be overcome by including some lectures on human genetics in the syllabuses of the diplomas in Psychological Medicine and Public Health, and creating a nucleus of medical officers of health and others competent to advise on genetic problems. In the absence of such provision it is doubtful whether the proposed mechanism would work, at any rate on an appreciable scale. It must be remembered that while the present legal position of voluntary sterilisation is uncertain, it is in practice done quite frequently by private practitioners and is sometimes sought on quite inadequate grounds. Owing, however, to some remote legal risks and to possible friction with committees or subscribers, it is in practice restricted to the fairly well-to-do, who need not depend on a hospital or on institutional provision, and many of those who in their own interests and the community's, would willingly get themselves sterilised, are prevented from doing so. The position is, therefore, that the rich can be and are sterilised without sufficient control, while the poor cannot in practice secure sterilisation, even under the most adequate supervision.

While the principle of voluntary sterilisation should be asserted and a mechanism created for giving effect to it, with proper precautions, it would be misleading to suggest that sterilisation can solve the problem of mental deficiency, or any other problems. What it might do if adopted on a sufficient scale is to check the disturbing cumulative growth of types of citizens not wanted by their parents or by anyone else.

Need for Research

This tentative discussion has clearly brought out the need for more research. While geneticists have ascertained in some detail the ways in which characters are inherited far too little is known about the inheritance of human temperament, physique, or even intelligence. The problem is inseparable from the question of population policy as a whole, and it is to be hoped that steps will soon be taken to collect systematically more data bearing on the development of the family, which, after all, is one of the most important and one of the least known of our institutions. A number of family histories of the social problem group have been collected by Mr. E. J. Lidbetter, and described in his 'Heredity and the Social Problem Group', but there is an urgent need for more investigation both in the laboratory and in the field to explore the causes and antecedents of mental and other defects, and generally to examine fundamental factors affecting the composition and characters of the population.

From this and from many other angles the need is becoming apparent for something of the nature of an Institute of Family Relations in which knowledge regarding medical, social and economic problems might be collected and analysed with special reference to the family. As we shall see in Chapter XIII a rather similar conclusion has been arrived at from a slightly different approach by the founders of the Pioneer Health Centre at Peckham. Failing such a point of focus it is very difficult to bring the complex technical problems bearing on the family and its fortunes into proper perspective.

XI. NUTRITION

Introduction—The Meaning of Malnutrition—Evidence of Malnutrition—Causes of Malnutrition—Nutrition and National Policies—Provision for Improving the Nutrition of the Population—Milk—Potatoes—Control and Management of Prices of Foodstuffs—Propaganda and Instruction—Research—Proposals.

Introduction

Since the publication in 1919 by the Medical Research Council of 'Vitamins: A Survey of Present Knowledge,' and the award of perhaps the highest scientific honour, the presidency of the Royal Society, to one of the chief investigators of vitamins, Sir F. Gowland Hopkins, the public have ceased to regard scientific experts on nutrition as amusing or dangerous cranks. In fact, the reaction has gone so far that cranks may now thrive on the reflected glory of the genuine scientists and not a few manufacturers of proprietary goods have found that "vitamins" are the latest discovery of the alchemists. The conclusion that there was a considerable amount of wrong feeding, and even underfeeding, among the poorer classes of the population, and that this accounted for much general debility, had often been drawn before, but never in the light of full scientific knowledge. The disclosures of the Report of the Ministry of National Service in 1920, which proved that large numbers of men in the prime of life were in C3 condition, are still being confirmed by the rejection of numerous recruits for the Army as physically unfit. Both the State and the individual are, therefore, being forced to realise the cost of ignorance about nutrition.

Captain Cook anticipated in practice the scientific principles of a later age when he fed his crew on germinated barley and cabbages preserved in vinegar, so saving them from the ravages of scurvy, but it was not for another hundred and more years that these principles were defined. At length it was discovered that some food substances contained unknown qualities which others had not got, and that the absence of these unknown substances caused disease. In the early years of the twentieth century, some of these substances were isolated or synthesised, and were classified by letters of the alphabet under the general term "vitamins." From these and related researches developed the wider conception of "protective food substances," including not only vitamins, but phosphorus, calcium, and so forth.

The practical implications of the nutrition problem are steadily emerging. In 1918 the Medical Research Council set up an "Accessory Food Factors Committee," and in 1926 a Nutrition Committee. In 1931 the Minister of Health constituted an Advisory Committee on Nutrition. In 1935 this was enlarged and reappointed jointly by the Minister of Health and the Secretary of State for Scotland. In 1933, as a result of a lengthy correspondence, the *Week-end Review* set up an independent committee to work out a summary of the essential factors in diet for males and females at various ages, and to relate these to the existing prices of foodstuffs. At about the same time a discussion on the subject arose following a paper read by Dr. M'Gonigle to the Royal Society of Medicine.

Almost immediately afterwards the British Medical Association set up a committee to examine the same question. Discussion now centred on the amount it was necessary for families of different size to spend in order to obtain an adequate diet.

But only further inquiries could determine how many families could afford this diet. Answers to this question have been attempted in the report of the inquiries of Sir J. B. Orr and the staff of the official Market Supply Committee, published under the title 'Food, Health and Income,' in the International Labour Office Report, 'Workers' Nutrition,' and in 'Poverty and Public Health,' by Dr. G. C. M. M'Gonigle and J. Kirby.

Not only sociologists but agriculturists and politicians have interested themselves in this question of nutrition. Much has been heard of the "marriage of Health and Agriculture." The League of Nations Health Committee secured a report on 'The Physiological Bases of Nutrition' in 1935. In the same year the Assembly of the League, partly as a result of a speech from Mr. Bruce, representing a food-producing country, Australia, set in motion an inquiry by a "Mixed Committee on the Problem of Nutrition" (including representatives of the Health Committee, the International Labour Office, and the International Institute of Agriculture), which published its final report, 'The Relation of Nutrition to Health, Agriculture, and Economic Policy,' in August 1937. Pressure of urban poverty and of the agricultural slump have combined to give the question of nutrition a prominent place among political issues. The debates in the House of Commons on malnutrition are often bitter. Yet while it is absolutely necessary to call vigorous attention to the problem of nutrition, the passion which it stirs up may hinder the active measures necessary to ameliorate conditions.

The Meaning of Malnutrition

Much confusion has been caused by the use, in conflicting or overlapping senses, of the term malnutrition, which has not been clearly defined. Some authorities now use two terms: "malnutrition" and "under-nourishment." By under-nourishment they mean insufficiency of calories or bulk food—a state which in extreme cases is ordinarily described as starvation. Without suffering from under-nourishment in this sense a person may suffer from malnutrition, due to a lack of the protective food elements. The most striking results of malnutrition are seen overseas in cases of scurvy, pellagra, or beri-beri, developed through lack of vitamins B or C, although the sufferer may never feel hungry.

Other diseases are also directly associated with lack of various vitamins or minerals. These include night blindness, some eye affections, some corneal ulcers, and cardio-renal disturbances. Some forms of anaemia also are due to lack of vitamin B. The common forms of anaemia are due to a deficient intake of iron containing foods. Simple goitre is largely due to a deficient intake of iodine, as is also endemic cretinism. Dental caries and rickets are now ascribed to dietetic defects, especially in childhood, including a deficient intake of vitamin D, necessary to procure proper formation of teeth and bones. The importance of this is obvious since so much of the human body is composed of calcium phosphates, which form the skeleton and teeth.

It is now suspected that liability to other diseases is evidence of malnourishment. For instance, some evidence has come to light which might indicate a correlation between defective nutrition and maternal and infant mortality, apart from that caused by a rickety pelvis. It has been shown that the incidence of tuberculosis rose in all the countries which suffered from shortage of food during the war, and rose in Germany again during the inflationary period, which indicates some correlation between inadequacy of diet and tuberculosis. (In Berlin the death rate from tuberculosis rose 65 per cent between 1914 and 1918, and in two occupied industrial towns in Northern France, 101 per cent and 183 per cent respectively.) Again, Dr. Spence in Newcastle has collected evidence that children in middle-class families are far less liable to measles and pneumonia than children in working-class homes, although this is evidently not due entirely to lack of food or to lack of the right kind of food.

To a school medical officer, malnutrition is recognisable by the presence of definite symptoms. These include height and weight in relation to age, appearance, carriage and bearing, muscular tone, elasticity of the tissues, lustre and texture of the skin, lustre of the hair and reflex action. Some of these factors can be measured objectively, others cannot. A clinical diagnosis of this kind is unsatisfactory because it is difficult to use objective standards in measuring these states. As a result of the Board of Education's circular in December 1934, school medical officers have introduced the more uniform standard suggested, but the figures given for different areas are in some cases still open to serious criticism. Thus, in 1935, no case of malnutrition was returned in one Welsh county, and no "bad" cases in two depressed areas. A school medical officer inevitably tends to take the average for his area as his standard. This "average" or mean condition of children, even in a prosperous area, will probably include a number of carious teeth in each individual child. It is misleading to apply the term "normal" to a child if by "normal" is meant the absence of abnormalities or defects.*

Apart from the difficulties of obtaining an objective standard for clinical measurement, a clinical diagnosis of malnutrition is complicated by the fact that malnourishment may be due to other factors. Without a complete knowledge of the home circumstances and clinical history, these factors are difficult to isolate.

In order to meet these difficulties experiments have been conducted to find out how height, weight and physical fitness can be improved by changes in diet. In these experiments the influence of other factors has been kept as constant as possible. When no additions to a diet will effect further improvements, it can be said with some approach to accuracy that that diet is an optimum diet. Obviously then, it is argued, anyone who falls below the standard of well-being attained by those who have had this diet continually since birth is malnourished. This conception of an optimum diet is theoretically useful, but for practical purposes it must be borne in mind that scientific knowledge on the subject is incomplete, that there may be a large number of alternative optimum diets and that account must be taken of many other factors, such as heredity and the previous medical history of the individual. A clinical survey of the whole nation is beyond the bounds of possibility at present. Yet it is necessary for administrators and others to know the incidence of malnourishment of this nature. Recent investigators have therefore resorted to the simpler method of trying to discover how many people actually obtain the optimum diet in Great Britain.

Those without sufficient income to buy the necessary diet will, it is argued, probably be malnourished, since they cannot attain the physical standards of those who do. Some of the requirements of an optimum diet are known, and it can be shown that not enough of these are produced or imported to feed the whole population adequately. Further, in the light of a series of family budgets and of a study of spending habits, the number of families actually getting these foodstuffs can be roughly estimated. Then it can be said that all those who are not getting these foodstuffs are malnourished. If these persons were clinically examined, evidence of malnutrition would be forthcoming in some of them, although in others malnutrition might be present without being detected. The advantage of this economic approach is evident, because in a clinical survey it would be almost impossible to determine how far general debility was due to malnutrition and how far it was due to such other causes as bad housing and bad hereditary factors. Consequently this economic approach to the problem may give a more accurate picture if the assumptions and methods used are statistically reliable.

---

* See also Proceedings of the Royal Statistical Society meeting of November 17th, 1937.

If the term "malnutrition" is freely used of a person dying of scurvy and of a person who is only just below the highest attainable physical standard, it will have no accurate meaning. This is, in fact, what has happened. It has been argued that there is very little malnutrition, because not many people suffer acutely from generally recognised "deficiency diseases," such as night blindness. It can equally well be argued that there is a considerable amount of malnutrition as there is an enormous amount of rickets or rickety conditions in the child population. The evidence of the existence of diseases like tuberculosis is again adduced as evidence for malnutrition. It could also be argued that so few people are below the normal (whatever that is) that there can be little malnutrition. Finally, it is shown that so few people come up to the best attainable standards that there is an enormous amount of malnutrition. In the absence of an accepted definition, these different assumptions about the meaning of malnutrition have led to fruitless arguments among both experts and politicians.

Evidence of Malnutrition

Even if there is some confusion in terminology the evil of malnutrition is real and substantial. Scurvy, beri-beri and pellagra, at least, are unimportant in Great Britain, although they are important problems in parts of the Empire and in Asia. Evidence of the more common but less serious deficiency diseases, such as, for example, night blindness and anæmia, is only too frequent. For instance, in one London hospital rather more than 50 per cent of the nursing mothers were found to have a hæmoglobin blood content of less than 80 per cent. Rickets is another deficiency disease, but the routine statistics are unreliable owing to the number of different standards used for determining it. Forty years ago only cases which would now be considered particularly gross were recognised at all. The standard of diagnosis has since become much stricter with the result that an enormous increase in reported cases of rickets has apparently coincided with an actual decrease in its incidence. Nevertheless, recent special inquiries have revealed that rickets is still a severe scourge. In 1927 a committee set up by the Board of Education actually concluded that out of a random sample of 1,638 children in L.C.C. schools, 87.5 per cent showed some sign of rickets, and 66.1 per cent two or more signs. The measurements of 100 women attending Stockton-on-Tees ante-natal clinics showed that 41 per cent had abnormal pelvises due to rickets in childhood. A statistical analysis of the records of 41 children attending child welfare centres at Stockton-on-Tees yielded interesting material. The children who provided this material were those who had attended the centres for one year or more and whose health records were comparatively full. It was discovered that 43 per cent of them had rickety stigmata, 24 per cent decaying teeth, and 31.2 per cent were suffering from anaemia. A definite correlation between the conditions mentioned above and bad feeding was noticed.

Dental caries is now, owing to the researches of Lady Mellanby, commonly regarded as a deficiency disease. In 1930 she inspected the teeth of a random sample of 1,293 five-year-old L.C.C. school children, and found that only 4.7 per cent were free from caries. Further, since 1931 the school dental officer in Stockton-on-Tees has inspected every child entering the public elementary schools, and discovered that only 5.6 per cent, 6.4 per cent, 7.0 per cent, and 8.2 per cent had entirely sound and complete deciduous teeth in the years 1931, 1932, 1933, and 1934 respectively. The latest annual report of the Department of Health for Scotland states that 70 per cent of the children examined at routine examinations in 1935-36 had defective teeth. Neither the figures for rickets nor for dental defects are evidence of existing malnutrition in the individual who is suffering, but they are evidence that at one time or another that individual has been malnourished.

Evidence has been produced to show that under a system of providing expectant mothers with extra food in parts of South Wales and other special areas, the maternal mortality rate fell. (See Chapter IV.) Moreover, Lady Williams has produced evidence that the maternal and infant mortality rates in the coal mining areas have varied with the amount of money available in the areas. For example, at the time of the 1921 local strike they rose, but during 1926, when provision in kind was made for expectant mothers and young children, they remained normal for the area. They rose again, however, with the cuts in 1931-32. In an experiment described in the *Lancet* by Sir Edward Mellanby (Nov. 18, 1933), 275 women attending ante-natal clinics in Sheffield were given a preparation rich in vitamins A and D during the last month of pregnancy and 275 were not. No vitamin preparation was given to any of the women who were brought into hospital at full time for their delivery. In the vitamin group the mortality rate in the puerperium using the British Medical Association standard was 1.1 per cent; in the other group 4.7 per cent. Dr. Spence's evidence of the extent of pneumonia and measles among children from working-class homes and their absence in homes where better food is available, suggests again that the extent of these diseases is some measure of the extent of malnutrition. The high death rate from tuberculosis and the liability to infection is also undoubtedly evidence of malnutrition. It must, however, be borne in mind that other factors may also cause these diseases.

Again, evidence in plenty is forthcoming that many people are below the comparatively low standard of physique required by the Army. The Report of the Ministry of National Service in 1920 was startling. The rejection in 1935 of 62 per cent of prospective army recruits suggested that little improvement has been made. Analysis over a four-year period (1931-34) of the deaths in 777 families in Stockton-on-Tees showed that the local death rate among families of employed persons was more than twice the rate which would be expected in a group of similar age and sex composition on the basis of the 1931 national census, while the death rate among local families of the unemployed was about three times the expected rate. This evidence is not conclusive, for other factors may be responsible. But other evidence from Stockton-on-Tees shows that housing conditions are less important than proper nourishment. In the well-known case of the families moved from a slum area to the Mount Pleasant Estate the death rate rose because, it is suggested, the increase in rents led to malnutrition.

The school medical officers' reports contain some evidence of the existence of malnutrition, although, as we have shown, the assumptions on which their measurements are based are not very reliable and the standards adopted not high. In 1935 1,687,331 children were examined in England and Wales and the nutrition of 14.6 per cent of these children was described as "excellent," of 74.1 per cent as "normal," 10.6 per cent as slightly "subnormal," and 0.7 per cent as "bad." In London only 0.08 per cent of the children examined were said to be "bad." In the Special Areas the results were rather different. Thus in Jarrow 22.9 per cent and 6.7 per cent of the children were described as being "slightly subnormal" and "bad" respectively. In Pontypridd urban district the percentages were 19.45 per cent and 4.76 per cent respectively. In spite of the recent revision it is not very clear what meaning is to be attached to such terms as "normal" in this connection. If a supposed average condition is indicated, it would be more straightforward to say so.

More interesting evidence is that given by Dr. Spence and by Dr. Friend of the difference of physical well-being, height and weight between well fed and badly fed children. Dr. Spence chose 124 children of the middle classes in Newcastle and 125 children of working-class parents between the ages of 1 and 5. Dr. Spence, in order to compare these groups, did not choose fixed averages, but what he called "normal zones" of height and weight. The results were:—

	Below height	Above height	Below weight	Above weight
	%	%	%	%
Middle-class children .	4.8	25.0	12.9	48.4
Working-class children .	47.0	1.7	55.2	11.2

Observations over 8 years of Christ's Hospital schoolboys show that at 13 they are on an average 2.4 inches taller than council school boys and at 17, 3.8 inches taller than employed males. Obvious hereditary and other environmental factors may account, and do account, for some of these differences. But experiments on animals and selected groups of individuals show that the differences are largely due to differences in nutrition. For example, at an industrial school, boys fed on an "adequate" diet grew at the rate of 1.84 inches a year, whereas those receiving extra milk grew at the rate of 2.6 inches a year. In Scotland 1,500 children in elementary schools were given additional milk for seven months, and the result was that their rate of growth was 20 per cent greater than that of the other children. This experiment was twice repeated with substantially the same results. An experiment on Maori children showed that an extra ½ to 1 pint of milk per day caused an increase in height of as much as twice that of ordinarily fed children and an increase in weight of 2½ times. Similarly, there is definite evidence to show that the children born in Berlin in 1918 and entering school in 1925 were appreciably smaller and lighter than those who entered in 1933. This difference was applicable also to the other war years.

Further evidence was obtained through the well-known comparison between the

Masai and Kikuyu tribes in Kenya, both living under similar conditions, but with different diets. The Masai males were on an average 5 inches taller than the Kikuyu males, and the incidence of diseases, such as bony deformities, carious teeth, anæmia, pulmonary and intestinal disease was double as heavy in the second tribe as in the first. Orr compares the diet of the Kikuyu with the diet of the lowest income groups in the British population, who, of course, also suffer from these diseases. Nor can the differences between the males in the two tribes be ascribed to hereditary factors, for the females of the Kikuyu are much healthier than the males, and very nearly as strong, and it seems that this is due to the fact that traditionally they have a different diet, including green herbs, special millets and salt, or salt substitutes. Further, the incidence of rickets only becomes heavy in older children, for the males till they are five years old have the women's diet. On the other hand there are well-known cases of races, such as the pygmies, whose small stature appears to be due to hereditary factors. Experiments have been carried out in India, Scotland and elsewhere of feeding groups of rats kept under the same environmental conditions on a diet comparable to that of a given section of the population. The correlation of the physique and incidence of disease between the rats and the human groups with a similar diet has been remarkable. In the same way the rate of growth of different groups of rats has been controlled by giving them different foods.

It is from experiments of this nature that the essential food constituents of an optimum diet can be worked out. This, in fact, has been provisionally done in the United States by Sherman and his co-workers, who have carried out extensive dietary surveys and intensive laboratory tests. Stiebeling, of the Government Bureau of Home Economics, has worked out from these a set of standards of the necessary food requirements for persons of different sexes and different ages. The final average per head of the population is weighted according to the age and sex distribution of the population.

Sir John Orr, after verifying that the age and sex distribution, on which the Stiebeling standards rested, corresponded with the average for the United Kingdom, used them to test the adequacy of the diets of the different income groups in the United Kingdom. These diets he had previously estimated on a basis of a sample of 1,152 family budgets. As a result he concluded that about 50 per cent of the population of the United Kingdom have a diet deficient in vitamins A and C, and that 50 per cent of the population are short of phosphorus and iron. Sir John Orr allowed a 50 per cent increase in his reckoning of the necessary mineral foodstuffs over the bare minimum of laboratory tests. Similarly, the vitamin requirements for health are assumed to be twice those which will prevent the occurrence of the deficiency diseases.

It is evident both from the qualifications that Sir John Orr himself makes in Appendix VI of 'Food, Health and Income,' and also from criticisms by Professor A. L. Bowley and others, that the statistical basis of these estimates is by no means sure. The number of budgets in the available sample was undesirably small. An undue proportion of the families were in the industrial North, and they included a relatively large number of dependents. The budgets were mainly collected in spring and early summer. Salary earners' budgets were inadequately represented. The necessary money cost of food was assumed to be equal at all ages. According to Bowley,* "the physiological quantitative basis of the need for calories, protein, and especially of vitamins and salts, is admittedly insufficiently established. The whole numerical basis of the prevalence of malnutrition and its relation to poverty is open to very serious criticism. Nevertheless, there is abundant medical evidence that malnutrition, slight or serious, is widespread, and that there are classes of the population here and abroad whose unaided resources are too small for adequate expenditure on food." When the collection of budgets for the revision of the cost of living index is complete, a review of the question will be desirable.

---

* 'Poverty and Nutrition' in the *Nineteenth Century and After*, December 1936.

The official Advisory Committee on Nutrition in their first report published in 1937, analysed the amounts of different foodstuffs consumed by the population. They concluded that "all except a relatively small fraction of the population are obtaining the full amount of calories they require." They considered that there was no aggregate deficiency of fats in the national diet, but that there was some deficiency among the very poorest. Owing to lack of data they were less dogmatic about proteins, but they thought that the poorer sections of the population did not get enough. They found, however, definitely, that the national consumption of liquid milk was only half that which the Technical Commission of the League Health Committee considered adequate or 60 per cent if dried and condensed milk were included. The national consumption of fruit and vegetables they considered to be below the nutritional optimum, this deficiency being predominant in the poorer sections of the population.

It appears to be common ground that a large group, including unemployed families, and others whose income per head is depressed by children, illness, or other factors, are seriously below the income level required to give them an adequate diet. A much larger group, composed mainly of families of wage-earners in employment, certainly suffers from malnutrition in one form or another on account of absolute inability to afford the necessary diet, or of spending, cooking or other practices which prevent an adequate diet from being actually enjoyed, although on paper there may be a sufficient income to obtain it. The size of the entire group which must suffer from malnutrition through shortage of income cannot be accurately measured until a much larger sample of family budgets is available, but enough is known to show that it must include several million persons—perhaps 10 million, perhaps 20 or more. The large number of children affected is especially disturbing.

Causes of Malnutrition

Sir John Orr, by analysing the amount that each family had to spend on food in the six groups into which he divided the population, clearly showed the relation between income and feeding. This conclusion again is one that the other evidence had certainly indicated. "The question of income is at the root of the nutrition problem," was the judgment of the I.L.O. report, 'Workers' Nutrition.' Yet it would be ignoring obvious facts to ascribe all malnutrition to lack of money. Malnutrition may sometimes be due to the consumption of some foods to excess owing to ignorance or greed. The Committee on the Scottish Health Services emphasised the lack of knowledge among the population of the different values of food.

This difficulty is enhanced by the manner in which the makers of proprietary foods are able to impose on the credulity and on the little scientific knowledge which a housewife may have. Again, the failure of the authorities to secure a clean and safe supply of milk has disastrous effects on the nutrition of the people. Poverty, bad housing, and ignorance hinder the proper preparation of food. For example, there are few facilities for washing and storing the valuable green foods in many tenement houses. In some really bad cases the cooking is done in the living room, and the housewife is naturally tempted to buy the foods which require least preparation.

Nutrition and National Policies

The science of nutrition has shown that man requires an extremely varied diet. One thing at least which is brought out by the investigations, some of which have just been described, is that even in a country with as high a standard of living as Great Britain, many people have not enough of the right kinds of food.

These conclusions are patently of great importance both for those responsible for improving the national health, and for those whose duty it is to guide the agricultural and commercial policy of the State. Nor can they be ignored by those responsible for fixing wages, rents, fares and other payments and charges which may affect the spending power of families in the lower income groups.

Agricultural production should be related to the nutritional needs of the people, and at the same time, both these factors must be taken into account in commercial policy. One thing at least which all the inquiries on nutrition, particularly the international ones, illustrate is that there is room for a very considerable increase in the consumption of agricultural products, and that the present difficulties of farmers in so many countries are due to defects in distribution and not to over-production. In Great Britain the agricultural problem viewed from a nutrition angle is one of increasing the production and consumption of "the protective foods," above all, milk and milk products. The production of eggs, fruit and vegetables is also an important constituent of this problem. Fortunately, the climate and soil are admirably fitted for production of these foods, which frequently cannot be imported as freshly, owing to the difficulties of transport, whereas the energy-giving foods, such as cereals, can be easily imported. It may also be said in general terms that it is undesirable to restrict the importation of energy-giving foods, since those with limited incomes must provide themselves with sufficient "energy" foods and bulk foods before buying "protective" foods, and such a policy would curtail the market for foods which home agriculture is best fitted to produce and which home consumers most need to consume.

The relation of nutrition to health justifies the spending of considerable sums of money in indirectly influencing the consumption of protective foodstuffs, and even in deliberately subsidising persons to enable them to buy these foodstuffs. For in this way ill-health will undoubtedly be reduced, and thus well-being will be increased and the cost of ill-health to the community minimised.

Provision for Improving the Nutrition of the Population

Already various authorities make efforts directly to improve the nutrition of some of the persons under their charge. Mention has been made in Chapter V of how the school meals service was set up partly as a result of the discovery of the low physical standard of recruits during the Boer War.

In England and Wales local education authorities may provide meals free for children who, by reason of lack of food, are unable to take full advantage of the education provided.

Meals are supplied free to children whose parents are necessitous, but if the parents can afford it they are expected to pay the whole or part of the cost. The method of selecting the children varies under different authorities. Sometimes it is by the use of an income test, and sometimes it is on the reports of the school medical officers. The Board of Education do not think that selection by an income test alone is justifiable. The nature of the meals provided varies. Some authorities provide three meals a day (breakfast, dinner and tea) at week-ends and during the school holidays. Others only make provision for a mid-day meal or a "milk meal." Some authorities provide cod-liver oil or malt extract. In London the L.C.C. have established nutrition centres to which children reported to be suffering from malnutrition are sent. At these centres tests are carried out and remedial measures suggested. In 1935-36, 235 local education authorities in England and Wales out of 316 made some provision. About 143,000 children (or 1 in 38 of all elementary school children) received free solid meals, but a much larger number (429,757 at March 31, 1937) received free milk under these provisions. Meals are supplied, not only in cases of need, but often for convenience, in the middle of the day. A charge is then made to cover cost. Nutritionally, these meals are often unsatisfactory.

In Scotland the education authorities are empowered to provide accommodation, apparatus and equipment and service for the preparation and supply of meals to pupils attending schools within their district. They have also the duty of providing meals in cases where a child is unable to take advantage of the education provided owing to the lack of food. 24 local education authorities out of 35 make provision for school meals. In some of these areas, however, most of the provision is made from local charities, trust funds or voluntary contributions. The number of children for whom meals were provided during the year ended July 31, 1936, is set out below:—

Meals primarily for children suffering from lack of food		Meals primarily for other children as a matter of convenience	
Paying	Non-paying	Paying	Non-paying
5,200	28,600	23,600	7,300

The nature of the meals provided varies as in England and Wales.

Milk

Since milk is the most valuable single foodstuff, it is not surprising to find that most attention has been paid to securing an adequate consumption of milk by those who need it. At present the three main lines of attack on the milk consumption problem are the milk for mothers and young children schemes (Rhondda, Tyneside and Whitehaven), coupled with distribution of free milk from welfare centres, the milk-in-schools scheme, together with the distribution of free milk to necessitous children under the Education Acts, and the various activities of the National Milk Publicity Council, of which the milk-in-industry scheme is the most noteworthy.

Of the 419 welfare authorities in England and Wales, 406 supply milk (fresh or dried) free or at a reduced price to necessitous expectant mothers, and the same number do so for necessitous nursing mothers. Milk assistance for necessitous pre-school children is given by 404 welfare authorities. In Wales 27 authorities supply milk at cost price to non-necessitous mothers and children. Rather more than seven million gallons of fresh milk are distributed each year in this way, but there is considerable variation in the practice of local authorities, both in the quantity and in the kind of milk given or sold. In Liverpool and Cardiff, for example, only the highest grade T.T. milk is provided when fresh milk is given, whereas Blackburn, Dudley and Hull, among others, apparently distribute only dried milk. The usual rate of free supply is one pint a day for fresh milk, but dried milk figures largely in all milk assistance, and is preferred by many medical officers as being easier to handle. Milk is also distributed free or cheaply from many private clinics and nursery schools. No figure is available of the number of welfare authorities in Scotland who provide this service, but in 1935, 422,000 gallons of liquid milk and 61,000 lbs. of dried milk, etc., was distributed to 15,000 mothers and 54,000 children.

In England and Wales four differential price experiments are being conducted in the Rhondda, at Jarrow, in the Walker district of Newcastle-on-Tyne, and at Whitehaven, by the Milk Marketing Board and the Commissioner for the Special Areas. The Rhondda experiment started in July 1936, Jarrow in January, Walker in April, and Whitehaven in October, 1937. They will probably be continued until September 1938. Under these schemes nursing and expectant mothers and pre-school children can obtain milk delivered to their houses in pint bottles at 2d. a pint on presentation of a voucher from the medical officer of health. One pint a day is the usual allowance, but the medical officer of health has discretion to grant more. There is no "means test" of any kind. By May 29, 1937, 6,358 persons were participating in the Rhondda scheme, and more than 19,000 gallons were consumed during the month, the corresponding figures for Jarrow being 1,412 persons and 4,200 gallons a month. In May 1937, 1,581 mothers and 7,084 children were participating in the three schemes then in operation. It has already been established that the milk consumption of the families covered by the Rhondda scheme was about the same as the average for the district when the scheme began. Three hundred and fifty of them bought no fresh milk at all in the week before it came into force, and 800 bought less than one pint per person per week. Since then their consumption of milk has risen by 42 per cent.

Under a similar scheme started by the Aberdeen and District Milk Marketing Board in December 1936, milk is supplied at 2d. a pint to persons on unemployment pay or out-door relief, with cards from the City Public Assistance Committee. There is no limit to the quantity of milk that may be bought by each purchaser at the reduced price, but he must fetch it from a depot in his own receptacle. In the week before the scheme came into operation 500 cards were issued, but the response generally has been very disappointing. During the twelve weeks ending March 5, 1937, an average of only 70 purchasers per day (never more than 95) bought an average of 15½ gallons, or 1.8 pints each from the depot. The main Scottish Board has also signified its willingness to consider a scheme on these lines, and in June 1936 it opened five milk bars in densely-populated parts of Glasgow to sell milk at 1½d. a pint to pre-school children and to school children during the holidays. At first the bars were a great success, but they seem to have suffered from the novelty wearing off. Two voluntary schemes are worth mention, both for pre-school children. One at Kidsgrove, in Staffordshire, where unemployment is still very heavy, provided milk at ½d. a third-pint bottle for about 500, or half the eligible children in the district. The scheme was run by unemployed voluntary workers, and a local co-operative dairy delivered at a margin of 4½d. a gallon. Owing largely to lack of funds it came to an end in October 1937. The other scheme, at Bath, was begun by members of the Society of Friends in 1934, and provided milk for pre-school children and for school children during the holidays. It lapsed during 1935.

The distribution of free milk to badly-nourished school children began in England and Wales with the Education Act of 1921, and in 1927 the National Milk Publicity Council launched the milk-in-schools scheme on a self-supporting basis. Under the Milk Act 1934, the Government made a grant of £500,000 a year to the Milk Marketing Board to extend the scheme by making milk available to all children in schools and junior instruction centres at a cost of ½d. for a third-pint bottle, the distributors working on a 6d. margin. The new scheme made a good start when it came into force on October 1, 1934, and nearly half the elementary school children in the country took part in it. At the end of March 1937 it was operating in 83 per cent of the public elementary school departments in England and Wales, containing 92 per cent of the public elementary school children. The schools where the scheme is not in operation are mainly small rural schools where there is difficulty in obtaining a supply. As 49 per cent of all elementary school children are participating in the scheme, this means that 43 per cent are in schools where the scheme is operating and yet do not take advantage of it. Over the whole of Great Britain rather less than half the seven million school children between the ages of 5 and 18 are drinking milk in school. The following table elaborates this statement.

NUMBER OF CHILDREN RECEIVING MILK IN SCHOOLS IN GREAT BRITAIN ON MARCH 31, 1937.

	Public Elementary Schools			Schools of Other Types			Total		
	Free	For payment	Total	Free	For payment	Total	Free	For payment	Total
ENGLAND AND WALES									
A. Under the Milk in Schools Scheme	378,768	2,132,118	2,510,886	21,518	134,612	156,130	400,286	2,266,730	2,667,016
B. Outside the Milk in Schools Scheme	21,436	158,920	180,356	8,035	13,502	21,537	29,471	172,422	201,893
TOTAL . .	400,204	2,291,038	2,691,242	29,553	148,114	177,667	429,757	2,439,152	2,868,909
SCOTLAND									
A. Under the Milk in Schools Scheme	No separate figures			No separate figures			64,771	233,748	298,519
B. Outside the Milk in Schools Scheme							No information		
GRAND TOTAL .							494,528	2,672,900	3,167,428

In the year ending March 31, 1937, 22,750,000 gallons of milk were consumed under the milk-in-schools scheme in England and Wales, and in Scotland 1,445,000 gallons were consumed in the first six months of 1937. The milk provided outside the scheme is sometimes liquid milk sold at the full retail price, but more often a dried milk preparation is used.

The National Milk Publicity Council is an organisation supported by both sides of the milk industry, which seeks to encourage the consumption of milk at the full price. Besides the ordinary methods of Press and poster advertising, the Council started in 1932 a campaign to foster the consumption of milk by the workers in factories, shops, offices and collieries. This campaign, which has been vigorously pursued since November 1936, has been extended during the ensuing twelve months to twenty times as many factories as before, and now covers more than 5,000, containing more than 1½ million workpeople, who consume about 600,000 gallons of milk a month. The milk is consumed mostly in the mid-morning interval, and the firms which have adopted the scheme are finding it very beneficial. A few firms are providing this milk cheaply for some or all of their workers. (Milk bars, of which about 600 are now scattered up and down the country, do not account for a very large amount of milk—at present only about 3,000,000 gallons a year—but they are excellent publicity for the product.)

Potatoes

An interesting experiment was carried out by the Potato Marketing Board in March and February of 1935, in providing potatoes at differential prices to the community at Bishop Auckland. The unemployed were allowed to buy potatoes from the Board's warehouse at a price below the ordinary retail price, and retailers were compensated for any loss they incurred. The experiment resulted in the fall in sales of potatoes at retail shops by 40 per cent, but an increase in the total consumption in the whole area of 96 per cent (or allowing for stocks left on hand and for the fall in sales by fried fish shops, an increase of 69 per cent). It showed that the consumption of foods such as potatoes, for which the demand is generally supposed to be inelastic, can be raised even at a time of exceptionally low prices by a reduction in prices. It also indicated a means of disposing of surplus crops which are inevitable in good seasons without damaging the retailers' connection with their customers.

Control and Management of Prices of Foodstuffs

As a result of the war the Profiteering Act of 1919 was passed, which gave the Board of Trade power to investigate prices, costs of and profits on articles of common use, to fix maximum prices and to make the charging of prices giving unreasonable profits an offence punishable by fine or imprisonment. A number of inquiries were made by standing committees set up under this and subsequent Acts. But the Acts were not in force for more than two years. In 1922 the Minister of Agriculture appointed what was known as the Linlithgow Committee—the Departmental Committee on Distribution and Prices of Agricultural Products. In its various reports it emphasised the facts which it summarised in its final report with the words "Taken as a whole, distribution costs are a far heavier burden than society will permanently consent to bear." On the basis of the recommendations of the Royal Commission on Food Prices, which reported in 1925, the Food Council was set up. It conducts inquiries into questions relating to the supply of prices and articles of food of general consumption. It has produced numerous reports, and it started with the publication in 1937 of a report to make an annual review of food prices. It performs the useful function of holding a watching brief for consumers. But only if its reports gain wide publicity and are suitably followed up, can it hope to be effective.

Propaganda and Instruction

The principles and practice of national nutrition are taught in schools in conjunction with general instruction given in domestic subjects, including cookery. In England and Wales this is given to over 90 per cent of the girls over 11 attending public elementary schools. Instruction is also given in secondary schools and in evening classes. Similar instruction is given in Scotland. Useful instruction and propaganda work are also carried out at maternity and child welfare clinics. The Central Council for Health Education have in England and Wales assisted in the spread of knowledge about proper feeding. The National Milk Publicity Council in England and Wales have been very successful in popularising milk by the use of the Press, cinemas, broadcasting, lectures and displays. Similar work has been done by the Scottish Milk Marketing Board. The B.M.A. have also aided in propaganda work with the publication of "Family Meals and Catering." The People's League of Health have issued pamphlets on nutrition and its relation to health. Lectures accompanied by demonstrations have been given under the auspices of the National Federation of Women's Institutes and the Scottish Federation of Women's Rural Institutes, which have been determined to arouse an interest in nutrition throughout the country.

Research

Some of the research work which is going on has already been described. The Medical Research Council in Great Britain has pioneered much of the fundamental research on nutrition which has lately won world-wide interest. Some is also conducted under the auspices of the Ministry of Health, the Department of Health for Scotland and the Advisory Committee on Nutrition, and by the Food Investigation Board of the Department of Scientific and Industrial Research. The Ministry of Agriculture and Fisheries has also interested itself in these problems. Some of the inquiries conducted by local authorities and their medical officers have been mentioned.

The Market Supply Committee, in conjunction with the Rowett Research Institute, Aberdeen, carried out the investigations, the results of which were published in the now famous work by Sir John Orr, 'Food, Health and Income.' More detailed investigations on these lines into the relation between income and nutrition are being instigated by the Advisory Committee on Nutrition. The work of the League of Nations and the International Labour Office has already been mentioned.

Proposals

Already, if only tentatively, the Government has seen the necessity for a nutrition policy as part of the constructive health services. The need, however, for adopting a bolder policy is still evident. It must, all the same, be remembered that whatever policy is selected, the most effective means of improving nutrition always remains a rise in the real wages of the workers, and consequently an increase in the amount of money that the working-class housewife, who, as all observers agree, is, despite some shortcomings, a remarkably good rule-of-thumb dietician, has to spend on food. This relationship between wages and nutrition cannot be over-emphasised in a period of rising prices such as this, when real wages tend to fall unless wage readjustments are brought about. An improvement in housing conditions will also undoubtedly lead to an improvement in nutrition, since the housewife's purchases are governed by the conditions under which she can cook and store her food.

Over a period of time expenditure on nutrition will lead to marked improvements in health and to a decrease in the expenditure on some of the curative services, and we therefore feel that the development of nutrition policy ought to take precedence over all other claims for the expansion of health services.

The Advisory Committee on Nutrition has shown in its First Report, which was mentioned earlier in this chapter, that there is in Great Britain quite a considerable under-consumption of some essential food products, particularly milk. Apart from educational propaganda, an increase in the consumption of these products can only be brought about by lowering their cost. This can be secured in the following ways:

(*a*) by savings in the cost of producing and distributing the products concerned;

(*b*) by readjusting policies already adopted or by the removal of taxation and quota restrictions to secure the maximum amount of money for promoting a nutrition policy;

(*c*) by readjustment in the spending habits of the population, for example, by efficient propaganda and educational work;

(*d*) by subsidies to lower the price of foods, or to lower it to particular classes of people.

(a) In a report on the health services it is hardly in place to discuss the reorganisation of the production and distribution of agricultural products. Already, however, P E P in Planning No. 93—"How Milk is Distributed," and No. 106—"Milk Distribution Proposals," has indicated how savings could be effected in the distribution of milk, and our proposed report on the milk industry will probably make further suggestions concerning both the distribution and production of milk. The Food Council in their report for the year 1936, published in April 1937, criticised the distributive methods and restrictive policies of some of the trades responsible for supplying the public with, for example, bread, meat and bacon. It has also often been pointed out, particularly by Professor R. G. Stapledon how the grasslands of Great Britain could be improved, and so carry more stock. There is little doubt that with the help of the biologists and physiologists, greater quantities of foodstuffs can be produced both in Great Britain and abroad directly the market is opened up for them, without necessarily any increase in the acreage under cultivation or devoted to stock.

(b) The most obvious industry in which a readjustment of existing policies could be secured with advantage is the milk industry. A subsidy out of direct taxation, which amounted in 1935-36 to £1,449,000 and in 1936-37 to £714,000 (England and Wales), is paid into the milk pool* in respectof milk manufactured into butter and cheese. The justification for the subsidy is that it gives producers far from the centres of population a fair price for their milk and prevents the seasonal surpluses causing a disastrous fall in prices, since they are kept out of the liquid milk market. But in Planning No. 93 we have demonstrated the advantages of and opportunities for expanding liquid milk consumption and lowering distribution costs, as an alternative to accepting the present inadequate liquid consumption and excessive distribution costs as a fixed quantity, and subsidising the use of milk in economically and socially less desirable ways.

---

* There are also subsidies for Scotland.

(c) While the housewife cannot be directly compelled to purchase a given amount of any product, children, as is already the case, can be given so much milk per head, and sometimes their meals at school, and the cost in each case can be recovered from the parents. This is only an extension of existing schemes and little exception can be taken to it by a community which compels its children to be educated, and until about 40 years ago, recovered part of the cost directly from the parents. Moreover, the more children who are brought into schemes of this kind, the lower is the cost of feeding them. Education in the nutritive value of milk, fruit and vegetables is still required. A number of habits also need modification. Thus the increase in the consumption of white bread is undesirable and a return should be made to the more nutritious wholemeal bread. Owing to the desire for speedy cooking and the high cost of fuel, housewives tend to concentrate on the purchase of "superior" cuts of meat suitable for grilling or rapid roasting, and ignore the equally nutritious and cheaper "inferior" cuts which can be stewed and boiled. The First Report of the Advisory Committee on Nutrition also stressed the importance of popularising skimmed milk, buttermilk and whey, which are cheap and contain almost all the valuable constituents of whole milk. The experience of the milk in schools scheme, however, has shown that other obstacles besides poverty have to be overcome if the national consumption of milk is to approach the optimum. Good publicity, coupled with a lowering, or at least no raising, of retail prices, is needed if this aim is to be achieved. Many inquiries and reports have shown that psychological reasons and general apathy are among the most important causes of the seriously low consumption of milk in Great Britain.

(d) If food consumption is to be further subsidised, milk is the most suitable product for experiment. The First Report of the Advisory Committee on Nutrition states: "A food which contains all the materials essential for growth and maintenance of life in a form ready for utilisation by the body is obviously of high value. Milk alone is the food which in itself nearly fulfils these conditions, being elaborated by the mammalian mother as the sole nutriment of her offspring during the period of most rapid growth."

It has already been shown that the consumption of milk in Great Britain is below the accepted nutritional standards, and that steps have been taken to remedy this deficiency. Public opinion and national interests demand that these schemes, already proved effective on a moderate scale, shall be extended to cover as nearly as possible all children and expectant and nursing mothers in families where milk is not available in sufficient quantities as a matter of course. It should not, however, be forgotten that efficient pasteurisation is essential at any rate for milk below T.T. standard if this vital food is to be rendered safe for human consumption. The following possible lines of expansion deserve to be specially looked at:

(i) Ensuring a continuance of the milk in schools scheme on the approximately 145 days of the year occupied by week-ends and school holidays. This, if completely effective, would lead to some 18 million gallons more milk annually being drunk by the 3 million children at present taking advantage of the scheme. The difficulty of this plan is chiefly that of inducing children to go to the distributing depot in their leisure time. If some means could be found of overcoming this difficulty, a great advance would be possible in this direction.

(ii) Raising the daily ration under the scheme from one-third of a pint to half a pint, leaving the price unchanged at ½d. This step would still leave an equal amount to be consumed at home before the optimum consumption by each child was reached. The maximum effect of these two changes would be to increase consumption under the milk in schools scheme to round about 70 million gallons a year.

(iii) At first sight there would seem to be no reason why this figure of 70 million gallons could not be doubled by bringing in the other half of the school population who are at present outside the scheme. Actually the scheme is at present available only to 92 per cent of the school population in England and Wales, but a variety of reasons, psychological and physiological as well as economic, make it unlikely that all school children will ever take advantage of the scheme. Whatever the reasons for the present only partial success of the scheme, it is so vitally important for the future of the nation that every child should get enough milk that the Board of Education and the Secretary of State for Scotland should not rest until non-participation in the scheme is at the irreducible minimum. In this connection attention should be directed to the possibilities of adding attractive flavouring in certain cases.

(iv) Perhaps even more important is the extension of the milk scheme to children between one and five years old, who are at present only partially covered by the distributions from welfare centres. Many children have sustained irreparable physical harm before ever they set foot in school. Here is a further group of over 2 million children, most of whom ought to be getting at least half a pint, if not one pint, of milk a day, which would absorb 50-100 million gallons a year.

(v) Finally there are always more than ½ a million expectant and nursing mothers in Great Britain, the majority of whom should be assured of an adequate supply of fresh milk, which they badly need and will not otherwise get. If they all received a pint of milk daily for six months before and after the birth, another 25 million gallons of milk would be absorbed. The most sensible method of distributing milk to mothers and pre-school children seems to be that adopted in the Rhondda and Jarrow experiments, and they could be given orders on approved dairies through the medical officers of health and health visitors for milk at a penny a pint. Alternatively, such milk could be distributed at the welfare centres, though only about half those who need this service at present attend them.

If the above figures are regarded as maxima, it may be assumed that considerably lower totals would be realised in practice. As the total of the maxima is well over 200 million gallons, of which less than 40 million gallons are covered by existing schemes, it seems clear that there is room for a very large expansion of milk consumption among those who are now consuming less than half the milk they need and most of whom cannot afford appreciably to increase their present consumption without special assistance.

Suppose, for the sake of argument, that 100 million gallons of milk could be diverted from the existing manufacturing "surplus" to additional liquid consumption by clearly defined groups whose need for more milk is recognised by all political parties and all recognised health authorities. This would mean that one-third of the existing subsidised surplus* would be taken off the manufacturing market, and therefore at least one-third of the existing manufacturing subsidy would be available for the new scheme before any additional burden could begin to fall on the Treasury.

The present distributive charge under the schools scheme is 6d. per gallon, and economy in distributive costs, together with the immediate advantage of a large all-the-year-round level turnover and the long-run advantage of developing an ever-expanding market, should make possible a reduction to an appreciably lower figure. One hundred million gallons sold at ½d. a half-pint (against ½d. a third-pint as at present) would fetch £3.3 millions. If this milk were supplied by the producer at 8d. a gallon (2.61d. above the present manufacturing price, including subsidy), and handled by the distributor at 6d. a gallon (the present charge under the milk in schools scheme), the outlay involved would be £5.83 millions, leaving a deficit to be met by subsidy of some £2½ millions, or about £1.8 millions in excess of the subsidy paid in 1936-37 for turning a similar amount of milk into socially less desirable channels. The cost of a subsidy designed to raise the price to the producer and to the distributor on 100 million gallons by 1d. each would work out in round figures at £830,000, and the subsidy could therefore be reduced according to this scale should it prove possible to make arrangements for producers to sell or for distributors to distribute milk without loss at lower prices than 8d. and 6d. respectively.

Obviously, such a proposal must be considered in relation to its effects on liquid consumption at the full ordinary price. Here opinions about the probable trends conflict, some holding that the consumption at differential prices will be almost wholly at the expense of sales at the normal price, while others argue from experience on similar schemes that the impetus and publicity of such a scheme would actually be likely to cause a simultaneous increase in ordinary demand at the full price. A sound scheme must provide against all contingencies. For the producer the gain from sales of 100 million gallons of surplus at 8d. (that is 2.61d. a gallon above the average manufacturing price for 1936-37) would, other things being equal, be just under £1.1 millions. He would therefore be on balance better off by this arrangement unless sales at the ordinary liquid price fell by enough to reduce pool receipts to a corresponding extent (in this case 17 million gallons at prices ruling in 1936-37). The distributor would be better off on balance up to the same point, provided that his net profit per gallon on sales at differential prices was not reduced to as little as 17 per cent of his net profit on sales at the ordinary price. We put forward these rough figures simply in order to illustrate the principle involved—a principle which is in everyday successful use by several of the largest industrial concerns in Great Britain. The disturbing rise which continues in the price of milk to the consumer makes it all the more urgent to examine such possibilities thoroughly.

---

* That part of the surplus which is concentrated in the summer months, plus a tolerance for wastage and fluctuations, would of course have to continue to be dealt with as at present.

Experiments in differential prices to increase demand on the lines adopted at Bishop Auckland could well be tried with some of the foodstuffs, the consumption of which the Advisory Committee thought should be increased. For instance, egg consumption is about 2.9 per head per week, and should be 3.9. The consumption of fish is about 8.9 ozs. per head per week, but this is not attained by the poorer sections of the population. Similarly, only about 56 ozs. of potatoes are consumed per head per week, and this amount should be increased.

* * * * *

A number of other measures would also help to improve the standard of nutrition. Research work on the nutritive value of various foodstuffs is still required, and measures for the utilisation of existing knowledge should be taken. Doctors should receive more instruction in the science of nutrition either in their undergraduate or post-graduate days. Experiments in the provision of communal cooking facilities might well be tried in new working-class flats. The problems connected with improving the safety and purity of the food supply have been dealt with in Chapter II.

* * * * *

Almost any measures for improving nutrition will entail expenditure for, as has already been said, "the question of income is at the root of the nutrition problem." But nutrition policy provides an essential preventive and constructive health service, especially when it is applied to children. It may well reduce the expenditure on health services and it will certainly help to build up a strong and healthy race.

Probably, therefore, a nutrition policy should have a prior claim on any funds available for extending the health services.

XII. PHYSICAL EDUCATION

Introduction—Physical Education and Health—Physical Education in Schools and Universities—Provision for Physical Education for those no longer at School—Provision in Industry and for the Unemployed—The Government's Scheme—Training of Teachers—Medical Supervision and Physical Education—A Skeleton Scheme of Physical Education—Conclusion.

Introduction

The immediate problem of the low physical standard of recruits for the Army and the far more vital problem of producing a race healthy in mind and body, capable of working to capacity, enjoying life fully, and of breeding and rearing healthy children, has brought to the fore the significance of physical education. Moreover, the problem of physical education has become more pressing because it has been suggested that the population of Great Britain may be considerably less fit than that of some Continental countries, particularly Germany. The Greek ideal of physical fitness has long been the nominal inspiration of many educational institutions in Great Britain. But on the Continent, particularly in Scandinavia and Germany, physical culture has been studied scientifically. In the first half of the nineteenth century, Ling in Sweden and Jahan in Germany, evolved systems of gymnastics. In Great Britain interest in their work was slow to develop except in military and naval circles. With the advent of compulsory elementary education, however, central departments began to take some notice of this question. But the military influence in the movement remained strong, and the Army alone could provide instructors, and it was not until 1890 that the word "drill" disappeared from the regulations of the Board of Education. Not until 1909 did physical education, with the publication of the 'Syllabus of Physical Education,' secure a reasonable place in the school curriculum.

Physical Education and Health

The exhaustive and challenging report, published in April 1936, of the British Medical Association's Committee entitled 'Report of the Physical Education Committee,' opened with the following words: "The aim of physical education is to obtain and maintain the best possible development and functioning of the body and thereby to aid the development of mental capacity and character." The report went on to criticise the divorce between intellectual and physical training in education and to show that physical education could help to awaken hidden capacities in individuals. Moreover, it stated that much could be done to remove deformities and that many people in middle-age allowed their bodies to deteriorate through lack of care. It is obvious that, without use, muscles and other physical faculties tend to become atrophied and that regular and proper use enables an individual to resist fatigue better. Exercises also correct such faults of bad posture as crooked spines, contracted chest walls and flat feet, they improve the general circulation and help the digestive, respiratory, excretory and nervous systems.

The lack of physical education is evident enough in the carriage and bearing of any Saturday afternoon football crowd, in an East End "pub," or in any crowd of middle-aged men or women. The keenness for physical recreation is at the moment, however, apparent among every class of the population directly facilities are available for it, whether in a boys' club or a girls' club, in a tap dancing class, on the running tracks, or even on the ordinary footways of a London park. Moreover, enforced or voluntary leisure due to unemployment or, occasionally, to shorter hours, has made the demand more insistent. There is, however, a very striking difference between the form taken by keenness for physical education in England as compared with many European countries. Anything resembling drill is disliked and an element of freedom and variety is essential if support is to be maintained.

In Great Britain there is, of course, a tendency to regard the national team games as sufficient for maintaining a standard of physical fitness. But the B.M.A. Committee considered that they were not adequate and that gymnastic exercises are an essential and fundamental part of physical education, particularly as these can be arranged in a sequence of progressively increasing difficulty. Moreover, they can be adapted to the needs of persons of different ages and physical condition, and they can produce a balanced development. The Committee also noticed with disfavour the tendency for the national team games to lose their original purpose and become too serious. The Committee, however, gave their blessing to the introduction of the minor team games like rounders, stool-ball and hand-ball as well as to the teaching of swimming. They further pointed out that any organised system of physical education must be closely related to the system of health education.

The Report of the Committee of the B.M.A. also emphasised the need for other necessities and amenities connected with physical education. Muscular work, they noted, demands more food in proportion to its severity, and sedentary work less than what might be described as a normal diet. They concluded that as physical exercise increases metabolism, it was necessary to increase the food supply, particularly of the unemployed, if they indulged in hard physical exercise. It is certain that hard physical exercises carried out by malnourished children would be extremely harmful. How closely the problems of nutrition and physical education are linked is shown by the fact that bad posture is often associated with minor degrees of rickets, a nutritional deficiency disease.

Closely connected with physical education is the desirability of securing facilities for giving people plenty of fresh air after working hours and for providing opportunities for exposing their bodies to the air and sun. Appropriate clothing should also be worn by those taking part in physical exercises. The Report of the B.M.A. noted the failure of the manufacturers to produce a comfortable, well-fitting shoe for two quite common types of feet. It is advisable also that the physical condition of those undergoing physical training should be supervised by doctors in order to prevent unnecessary strains and stresses.

Physical Education in Schools and Universities

Elementary Schools

As has been seen, the Board of Education have insisted on physical education being included in the time tables of public elementary schools, and in 1933 they issued a new syllabus. This sets out the value of a daily period of exercises and contains many new exercises designed with the object of encouraging good posture and muscular agility. In it also the value of the minor team games is emphasised. Physical education is taught in the elementary schools by the ordinary certificated teachers, who have to pass an examination in it before they leave their training college, and by itinerant specialist teachers. With the centralisation of education in fewer schools, more teachers will be able to make at any rate a partial specialisation in the subject. Nevertheless, there is a definite shortage, particularly of young teachers, in this subject. One of the difficulties encountered in providing for physical education is lack of facilities or lack of apparatus, and above all, the lack of gymnasia and playing fields. This is particularly true in Scotland, where team games are not generally played in school hours and, if they are, only by a minority of the pupils.

Efforts are being made to provide these facilities. For instance, local authorities are being urged to take measures to secure playing fields on new housing estates, and when new senior schools are built under the Hadow Scheme, gymnasia are provided. Other measures include, for instance, in Birmingham the provision of open-air classes on the playing fields to enable children to spend the day there. In East Suffolk an enterprising organiser of physical training has secured the extension of swimming facilities in numerous schools by inquiries about the safety of bathing on the coast, selecting pools and rivers, and having them, in some cases, deepened and cleaned at a trifling cost. As a result there are now at least 40 swimming centres in East Suffolk. One of the earliest moves on a national scale to improve British physical education was made in January 1936, when the Board of Education issued a circular on Physical Education to local authorities pointing out its value to all young persons, the responsibilities of the local authorities, and the need for properly trained teachers, and for the appointment of organisers of physical training. It was specifically stated in the circular that there should be a daily period of organised physical activity in every elementary school. A similar circular was issued by the Scottish Education Department.

Secondary and Other Schools

The B.M.A. Committee endeavoured to find out what provision was made for physical education in secondary schools. Their questionnaire was answered by 292 schools, 116 of which were represented at the Headmasters' Conference while 176 were not. Only 20 per cent of the non-conference schools and 11 per cent of the conference schools were employing men who had been trained to teach physical education in a non-military college; 20 per cent of the non-conference and 58 per cent of the conference schools were employing ex-service sergeants. The Committee commented very unfavourably on this situation and recommended that, besides any other members of the staff qualified to teach physical education, there should always be a fully qualified physical training teacher or a specially trained ex-service commissioned officer on the staff of the schools.

At the same time, the Committee were of the opinion that the provision of accommodation and equipment were adequate except in secondary schools of local authorities, which sometimes lacked sufficient playing fields, but that the time allowance for physical education was often grossly inadequate. The Committee advocated the devotion of at least three hours a week to it besides the appointment of additional teachers to do the necessary work. The standard of physical education in girls' public and secondary schools was found to be much higher than in the boys' schools. Physical instructresses who have had three years' training are generally employed, and "drill" has been completely superseded by real physical education. The Committee thought that the accommodation and equipment in these schools were generally adequate. However, they noted that insufficient time was devoted to physical education.

In fact, physical education, and efforts to link to it the teaching of biology and hygiene in schools, are at present forced into the background by the demands of the examination system. The B.M.A. Committee condemned the almost universal practice in both girls' and boys' schools of exempting those working for examinations from gymnastic and similar exercises. The circulars of the central education departments, previously referred to, dealt also with the problem of the secondary schools. The need for gymnasia and for trained teachers was stressed, and the existing situation was described as very unfortunate.

The B.M.A. Committee also criticised the lack of adequate physical education in junior technical schools and private preparatory schools for boys. They commented unfavourably, as did the Committee on the Scottish Health Services, on the lack of interest in physical education in the universities, particularly in the university departments for the training of teachers. This is especially marked if it is compared with the attention which is given to the subject in many Continental universities.

Organisers of Physical Education

Machinery for the promotion of physical education by the educational authorities has long been in existence. The Board of Education and the Scottish Education Department employ inspectors of physical education. Above all, many local education authorities have adopted the policy of appointing organisers of physical education. Their work is invaluable. It extends beyond the elementary schools and comprises the organisation of all physical education in the authority's area, and sympathetic contact with voluntary organisations. It may also include advising the authority on the supply of gymnastic and games equipment and a general supervision of the playing fields owned by the authority. Not the least important part of their work is the training, encouraging and helping of the teachers in the various schools. It is satisfactory that the number of authorities employing them in England and Wales has increased from 124, when the Board's circular was issued in January 1936, to 210 in August 1937. In Scotland 11 authorities employ them, and in the case of 5 authorities, specialist teachers act in an advisory capacity.

Provision for Physical Education for those no longer at School

The problem of the provision of physical education for those no longer at school is in a far more unsatisfactory state than the provision for physical education in schools. Apart from a limited amount done by local authorities, chiefly through evening institutes, and the special provisions for the unemployed in junior instruction centres, physical education has been virtually unassisted by the State or by the local authorities. This situation is, however, being remedied by the Government scheme.* Yet despite the efforts of boys' and girls' clubs, Boy Scout and Girl Guide Associations and keep-fit classes, the B.M.A. Committee estimated that probably about 70 per cent of the boys between 14 and 18 in England and Wales received no proper physical training. This estimate was based on a survey made by the National Association of Boys' Clubs on behalf of the Carnegie United Kingdom Trust. The B.M.A. Committee further pointed out that probably not less than 40 per cent of the population between 14 and 40 need physical training, but do not participate in it adequately, if at all.

---

* Described on page 346.

Juveniles

The local authorities' contribution to the provision of the physical education of the 14-18 group is, as has been said, small. They organise classes conducted by trained instructors in junior evening institutes.* These include recreative gymnastics, games and boxing. The B.M.A. Committee, however, pointed out that students were only allowed to join an evening institute to take a "group course" extending over two or three nights a week, and in order to take physical education a student must attend on a third or fourth night. The Committee regarded this as unreasonable and suggested that physical education should be included in the "group course," that students should be permitted to join only for physical education, and that the regulations as to attendance registers should be relaxed for the benefit of these students.

Local authorities assist voluntary bodies financially or by allowing the use of premises and the services of teachers. Under the Physical Training and Recreation Act 1937 and other legislation they may supply facilities for physical training and social recreation, such as camps and playing fields. They may provide swimming baths and gymnasia, and they may create community centres with facilities for physical recreation. In this process it is proposed to assist institutions which are promoting club and community life and only incidentally improving physical fitness.

The Juvenile Organisations Committee is an Advisory Committee under the Board of Education. Its function is to advise the Board on the problems connected with the social and physical welfare of youth. It also makes efforts to promote local Juvenile Organisations Committees for the purpose of discovering the needs of any area and taking measures to fill the gaps in the services provided. There are now in England and Wales over 80 Juvenile Organisations Committees, and in London there is a complete scheme which does valuable work. In Scotland this work is done by the Scottish Juvenile Welfare and After Care Office, under the control of the Secretary of State. The National Council of Social Service is also concerned in promoting efforts to secure co-operation in the development of social, educational and recreational activities. In Scotland again, this work is done by the Scottish Council of Community Service.

The age-group 14-18 principally finds its opportunities for physical recreation through voluntary bodies. Some of these, such as the Women's League of Health and Beauty, are concerned with all sections of the population. Others such as the Institute of Margaret Morris Movement, are concerned with all age-groups, but only with particular aspects of physical education.

A large number of these bodies are not solely or even primarily concerned with promoting physical education, but they play an important part in promoting it and providing facilities for it. The best known of them include, for boys, the Boy Scouts, Association (the total membership of the movement, including officers, is 431,300*); the National Association of Boys' Clubs (total membership of constituent clubs is 129,600); the Boys' Brigade (57,000 in physical training classes); the Church Lads' Brigade (membership 20,000), and The Young Men's Christian Association. The organisations for girls include the Girl Guides' Association (membership of the movement, including officers, 529,870); the National Council of Girls' Clubs (the membership of affiliated clubs is 300,000); the Girls' Life Brigade, and the Young Women's Christian Association.

---

* Other evening institutes make the same provision for those over 1 .

The British Medical Association concluded from their own inquiries and from the inquiries made by the National Association of Boys' Clubs on behalf of the Carnegie United Kingdom Trust, that in regard to boys, probably only 25 per cent of the members of a voluntary society participated in the physical activities provided, and that the facilities available in April 1936, when they reported, did not permit even that proportion attending more than one class a week.

King George's Jubilee Trust has lately been actively pressing forward the work of organisations which are concerned with the leisure activities of the young by making monetary grants to them. Up till March 1937, it had collected just over £1,000,000. It had allocated by that date about £100,000 to various organisations, such as the National Association of Boys' Clubs, the Boy Scouts' Association, the National Council of Girls' Clubs, and the Youth Hostels Association. It will remain in existence to collect money and to distribute both the money it collects and the income of the fund in much the same way as it has done in the first years of its existence.

General Provision

There are national bodies interested in directing the promotion of physical education and providing facilities for it. In 1935, the Central Council of Recreative Physical Training was set up to co-ordinate, advise on and even direct some of the nation's measures for promoting physical education. Over 100 organisations are represented on the Council. It inaugurates county movements for the promotion of physical education; classes are held under its auspices, demonstrations arranged and advice tendered. The Committee of the B.M.A. considered that it could perform a valuable service. The memorandum on Physical Training and Recreation,† presented to Parliament by the President of the Board of Education and the Secretary of State for Scotland in January 1937, proposed that grants should be payable to the Council in order to supplement the provision for training teachers, to provide expert advice and to enable adequate salaries to be paid to teachers.

With the growing interest in physical education and recreation during the last few years, many organisations and associations interested in it have been created or strengthened. Some are concerned with one particular aspect of physical development, such as the English Folk Dance and Song Society. Almost all except the professional organisations have local branches, and are merely spontaneously organised groups devoted to the promotion of physical culture.

---

*In all cases the figures refer to Great Britain and are only approximate estimates.

† Cmd 5364.

The movement for physical culture has been very popular among women. "Keep-fit" classes have spread rapidly throughout the country, not least in the large industrial towns. They are frequently run by the local organiser of physical education. The B.M.A. Committee reported that "No apparatus is employed at these classes, but simple physical exercises and dances are performed to music in a cheerful atmosphere, and at the end of the lesson, sheets of home exercises are distributed. There is a complete absence of discipline, no rules are imposed, and the members come and go as they please. These classes have given happy recreation to hundreds of women who had never known the joy of movement before." Many of these classes are connected with the Women's League of Health and Beauty. This remarkable movement started with 30 members in 1930 and now provides inexpensive physical recreation to about 100,000 members. The annual subscription is only 2s. 6d., and 6d. is charged for attendance at any class with over 50 members, or 1s. for any class under 50. It also trains teachers, for whom there is an ever growing demand.

The lack of any effective voluntary organisations to provide facilities for physical education for men is a serious gap in the existing provision. Moreover, it is making the Government's plan for encouraging physical education by subsidising voluntary bodies more difficult, since there are few organisations in this field to subsidise, and no nation-wide organisation.

The National Playing Fields Association has for ten years been collecting money and conducting propaganda to enable more playing fields to be laid out in Great Britain. Land is frequently granted to it to be held in trust for the inhabitants of a town or village. It originally advocated that there should be five acres of open space for every 1,000 of the population, and of the five acres, four should be playing fields. It presumed, however, that three acres would be provided by private clubs. Recent experience has compelled it to revise its previous estimate, and it is now asking for seven acres per 1,000 of the population. The present provision falls far short of even the first standard, being one acre per 1,000 of the population. One aspect of the need for more playing fields is illustrated by the L.C.C. evidence that there is a direct correlation between the number of street accidents involving children and the provision of playing fields. Between 1927 and 1936 the Carnegie Trustees, in collaboration with the Association, distributed about £208,000 for the purpose of acquiring, laying out and equipping playing fields. Further, many communities chose to celebrate the Jubilee by providing playing fields. In order to enable the Carnegie Trustees to assist many of the bodies which were still making applications, in 1935 the Jubilee Trust made a grant of £7,000 to them. Now the King George's Fields Foundation, which has approximately £400,000 available, is collaborating with the Association to create King George's Memorial Fields, and the White Paper on the Government's scheme has promised State assistance to the Association.

Other bodies which indirectly promote physical education are organisations like the Youth Hostels Association and the Ramblers Clubs. The Forestry Commission, which controls about a million acres in Great Britain, has recently begun to assist, for example by the creation of a National Forest Park in Argyll.

Provision in Industry and for the Unemployed

Facilities for physical recreation are provided by a number of firms and other organisations in Great Britain. Chief among these is the Miners' Welfare Fund, financed by a levy on every ton of coal raised. Up to the end of 1936, 54.8 per cent—or £5,304,220—of all the district fund grants had gone to extend and maintain recreational activities. The objects of the grants in 1936 are set out in the following table:

Grants allocated for all recreational purposes in 1936	New schemes £	Existing schemes £	Total £
Recreation grounds	21,231	66,299	87,530
Institutes and halls	19,311	52,175	71,486
Boys' clubs and camps . . .	130	5,807	5,937
Swimming pools	700	1,079	1,779
Miscellaneous	—	756	756
TOTAL	£41,372	£126,116	£167,488

The amount spent upon recreation grounds in 1936 was made up as follows:—

	Amount of Grant £	No. of Schemes
Children's playgrounds . . .	22,005	51
Bowls	10,945	45
Tennis	10,385	41
Football	3,230	8
Golf (putting only)	470	6
Cricket	3,144	11
Pavilions	17,246	59
Equipment	1,286	26
Non-Capital expenditure . . .	661	16
Various purposes	18,158	86
TOTAL	£87,530	349

The Industrial Welfare Society circularised a number of firms to obtain information for the B.M.A. Committee on Physical Education. But it is known that most of the firms replying were large organisations with over 1,000 employees, and the Annual Report of the Chief Inspector of Factories for 1935 shows that about 86 per cent of the total number of persons employed in factories, work in factories which employ 1,000 or less than 1,000 persons. Moreover, the inquiry covered trades and organisations not in the Chief Inspector's Report, such as the London Passenger Transport Board. Replies were received from 88 of these firms employing about 367,306 employees. Twenty-nine firms in the light industries group and 12 in the heavy industries were found to have some form of organised gymnastics. Fifty-one firms in the light industries group provided playing fields, two made provision only for tennis and bowls, and five hired municipal or private pitches. In the heavy industries making returns, there was found to be much the same type of provision. Some of the large stores and business houses also make some provision for physical recreation.

Some firms are willing to extend the provision of facilities for physical recreation, and it seems desirable that they should do this whenever it is possible. Nevertheless, the provision of these facilities is primarily a community service. More use could be made of the sports grounds of firms by other members of the community, including the employees' children. Often enough these grounds are now only used on Saturday afternoons and in the summer evenings.

The Ministry of Labour, in areas of bad unemployment, opened in 1932 and afterwards centres for physical training of men between 18 and 30 who were unemployed. After these centres had been run by the Ministry for six months, the work was, in most areas, taken over by the National Council of Social Service, which has developed physical training for unemployed men in connection with the occupational clubs as part of its general programme of social and educational activities, for which it has received annual grants from the Ministry of Labour. The classes conducted by the National Council with the aid of Ministry of Labour funds have been confined mainly to areas of severe and prolonged unemployment. The Ministry has also organised junior instruction centres for unemployed boys and girls. Under the 1934 Unemployment Insurance Act, the Ministry may secure the attendance of all unemployed juveniles, even if they are not receiving unemployment benefit, at the centres. There were 21,716 juveniles attending in these centres in September 1937. The local education authorities must also submit to the Minister schemes for the provision of courses including physical training.

The Government's Scheme

The Government's proposals outlined in 'Physical Training and Recreation,' the memorandum explaining the Government's proposals for the development and extension of the facilities available, dated January 1937, and implemented by the Physical Training and Recreation Act 1937, aim at helping to develop opportunities for physical recreation and training for those who have left school. The scheme, in fact, is designed as a corollary to the proposals issued in Circular 1445, dated January 13, 1936, entitled 'Physical Education'. It is proposed to spend about £2,400,000 in the course of three years, primarily in grants to assist bodies already interested in the work. The Government, therefore, have rejected uniformity and compulsion, and rely on voluntary organisations to create an adequate system of physical training, or rather to extend it. Nor do the Government propose to limit support to formal physical training. They are prepared to further any activities which may promote physical fitness, and, moreover, to assist institutions which are providing not only for physical activities, but for club and community life, which are often inextricably bound up with these activities.

The Government have set up two National Advisory Councils, one for England and Wales, and one for Scotland, each consisting of about thirty persons interested in the problems connected with the development of physical activities in the country. These councils are divided into sub-committees for the carrying out of particular work, such as setting up the National College of Physical Training. There are also two small Grants Committees, of three members each, to deal in detail with any application for a grant, and to allocate, subject to the Minister's approval, the funds available. Applications for a grant go through the local area committees, which have been set up to consider the needs of fairly wide areas and to recommend measures for securing their satisfaction.

Grants will be made primarily to aid the individual capital expenditure of local organisations and local authorities and to provide funds for the training and supply of teachers and leaders. Grants will also be made to some central organisations. The Central Council of Recreative Physical Training is mentioned specifically in the White Paper, and the proposal is made that the National Playing Fields Association should be responsible for the allocation of the Government's advances in aid of increasing playing fields. It is intended also to establish a National College of Physical Training, whose main function will be to train instructors to organise and undertake recreational physical training throughout the country. Further grants are to be available for the making of swimming baths.

Apart from grants for this purpose, local authorities will generally be encouraged to use their powers under the Education Acts if their proposed expenditure can be brought under these Acts, rather than to seek for grants. To cover administrative expenses, the cost of the maintenance of the National Training College, interim training arrangements before it is established, grants for administration to such bodies as the Central Council of Recreative Physical Training, and the National Playing Fields Association, as well as the provision of instructors where they are necessary, a further £170,000 a year will be required in addition to the sum previously mentioned.

Training of Teachers

The lack of trained teachers has been noted at every point in this discussion. At the moment the facilities for acquiring training are inadequate, and in some cases the arrangements made do not take into account that the effective working life of a professional teacher is necessarily limited.

There are seven physical training colleges in Great Britain for women, and two for men. They all, except the Carnegie College in Leeds, provide three years courses. They are well equipped with apparatus and the students gain practical experience in local schools, clinics and neighbouring hospitals. But the courses do not fit them to teach any other subject except physical education. One year courses are available at some of these institutes. The Carnegie College only takes graduates or certificated teachers, and these are expected to teach one academic subject as well as physical education on taking up appointments. It is part of the Leeds City Training College for Teachers, but received a grant of over £30,000 from the Carnegie United Kingdom Trust to enable it to start its work. It is excellently equipped and has been able to obtain a very high standard of students who, when they have completed their courses, have been much in demand. Moreover, it teaches them to correct by special exercises tendencies towards physical defects, such as spinal curvatures, flat feet and poor posture. A similar course for certificated men teachers was inaugurated at Loughborough College in 1936, and another is being started at the Goldsmith's College.

The B.M.A Committee, following the proposals of the Association of Headmistresses, advocated that, without prejudice to the existing courses, an alternative course should be provided for women interested in giving physical education. It was suggested that these students should spend two years at a university studying academic subjects for a pass degree, and then do a year's course at a physical training college. This would offer better prospects to girls with higher intellectual qualifications than those who were prepared to spend three years studying a subject which did not lead to a degree. It would also help to eliminate the cleavage between intellectual and physical education and enable small schools to employ a person adequately trained to teach physical education.

More facilities for training male graduates were thought by the B.M.A. Committee to be vitally necessary. Moreover, they believed that a two year course might be substituted for the intensive one year course, and some arrangement possibly made similar to that suggested for women. The National College of Physical Training will afford opportunities for discovering different methods of training instructors.

The B.M.A Committee found that little attention was paid to physical education by the eight university teachers' training departments which answered their questionnaire. The subject is only an optional one while the graduate is in the departments. Moreover, undergraduates have little opportunity of acquiring a knowledge of gymnastics. The Committee also remarked that a considerable number of university students took little part in any games. The Committee urged the universities to take up the scientific study of physical education and to provide facilities for it, and to encourage all those who were interested. Already, in Scottish universities, a movement to unite those interested in the problem, which was started in Edinburgh as the "Edinburgh University and Former Pupils' Athletic Union," is gaining very considerable support. Further, the Government has promised in the White Paper Cmd. 5364 to assist the universities to give modern instruction if necessary.

The training colleges for teachers whose students obtain employment in elementary schools have made physical education a compulsory part of their syllabus, but their equipment and accommodation is sometimes appallingly inadequate. Recently, advanced courses have been started in several training colleges, and students taking it have been expected to devote a greatly increased allowance of time to it.

A number of physical training colleges and other organisations run vacation courses. These should be primarily refresher courses, and they should, the B.M.A. thought, rank for grants in aid in the same way as vacation courses in academic subjects. Short courses are also sometimes organised by local authorities. Under the Government's scheme, the Central Council of Recreative Physical Training are to receive special grants for taking measures to make up the deficiencies in trained leaders of recreative physical training.

Medical Supervision and Physical Education

The B.M.A Committee devoted considerable space in their Report to the importance of medical supervision of those taking part in physical education. They pointed out that in this field of activity the doctor had a chance of helping the healthy as well as the sick and of furthering the well-being of the community as well as that of the individual.

In public elementary schools the pupils undergo a regular medical examination, but in boys' public and secondary schools there are sometimes no periodical medical examinations; the practice is better in girls' schools. The B.M.A. Committee stressed the value of co-operation between the headmaster, the parents and the gymnastic teacher in promoting physical well-being. They noticed particularly the importance of this co-operation in mixed schools, in providing means of avoiding the strain which girls may suffer. The Committee also stated that medical supervision was important to prevent under-nourished children suffering from strain and to enable the authorities concerned to provide children with sufficient nourishment to allow them to take part in the normal activities of physical education.

The Committee found that voluntary organisations paid little attention to medical supervision. The National Council of Girls' Clubs, however, has a scheme for the medical supervision of its constituent clubs which will enable the club medical service to be linked to school medical services, to the panel doctors' work, and to the hospital services. Some experiments have been made in connection with boys' clubs. The Committee suggested that all recreative physical training classes should try to secure non-technical lectures, preferably by medical men, on physiology and hygiene. There should also be much greater co-operation between the education and medical services in watching over the physical well-being of the population and the medical and physical training staff of any area should be ready to assist local "keep fit" and other movements. In industry, recreative physical education can be linked to the medical service of any particular firm.

A Skeleton Scheme of Physical Education

The initiative in the direction of physical education in Great Britain has now passed from the hands of keen individual headmasters and headmistresses, of active voluntary organisations, and even of interested local authorities and of the national associations of voluntary organisations, into the hands of central government departments and committees. The publication of the Board of Education's circular in January 1936, and 'Physical Training and Recreation' in January 1937, and the passage of the Physical Training and Recreation Bill through Parliament, are the landmarks in this movement. But much still depends on the enthusiasm of teachers, the activity of local authorities and particularly of their organisers. On the national associations of the voluntary organisations must still fall much of the work of exploring new spheres of activity, and encouraging financially and with personnel their constituent members. On the individual clubs, troops and other organisations of the voluntary bodies will fall the main burden of promoting physical fitness among the adolescents and young men and women who have left school. To them the Government are intending to give the greatest support in the form of financial assistance for capital expenditure.

Conclusion

Evidently the state of physical education in Great Britain is far from satisfactory. The mechanism which exists for it is still hopelessly inadequate in the sense that there are not enough leaders, organisers, nor instructors, nor enough playing fields and centres, to cope with more than a fraction of the need. But this inadequacy in detail is only a surface symptom of much deeper inadequacies and, in fact, of a failure to solve the whole problem of leisure. At the centre, in spite of well-meant efforts and much goodwill and idealism, there is nothing like a headquarters staff, giving its whole mind and time to the planning and organisation of the necessary facilities.

Owing partly to the risks in present conditions of raising the issue of military conscription even in a remote form, the Government have relied very largely on unofficial bodies for the execution of the scheme, and have run into serious difficulties on that account. Spontaneous and voluntary social work has a great record of achievement, but the attempt to force by government grants the rapid development of a flourishing organism possessing all the virtues of voluntaryism raises new dangers and difficulties. At least, if the initiative is to rest, in fact if not in name, with the central government, it seems essential to create a small, mobile, and vigorous headquarters personnel able to provide the stiffening, experience and staying power which large-scale and lasting development requires.

Even this, however, is by no means enough. We have to face the fact that in Great Britain both adolescents and adults, whatever their educational background, are at present remarkably ill-informed about the care of their bodies. The whole approach is wrong, and is turning out a population of what have been described as physical illiterates, unable to use their leisure in a constructive and healthy manner. We need an educational system which will not treat its health branch as outside inspectors, and use hygiene and physical education as "subjects" with a Cinderella status in the curriculum, but will evolve and teach a science of life in which physical education shall become an essential and organic element in general education. Much lip service is given on school speech days and in community activities to the ideal of a sound mind in a sound body, but it is only necessary to look at any group of British citizens of any age, any social or income class and any geographical origin, to see at a glance that only a small minority either know or care how to hold themselves, how to keep themselves reasonably fit, or how to develop their bodies. This is the challenge which physical education has to meet.

XIII. OTHER EXPERIMENTAL SERVICES

Psychological Medicine and Mental Health—Introduction—Evidence of Prevalence of Mental Ill-health (psycho-neurosis)—Provision for the Cure of Mental Ill-health—Teaching—Research—Conclusion—**Health Education:** Introduction—The Mothers—The Schools—General Health Education—Conclusion—**The Pioneer Health Centre, Peckham**—Purpose—Medical Surveys—Some Activities—Conclusion.

In this chapter we deal with Psychological Medicine and Mental Health, Health Education, and the Pioneer Health Centre at Peckham. The services described bear little or no relation to each other except that they are primarily experimental. We consider that they need separate and individual treatment since we regard each of them as of special importance.

PSYCHOLOGICAL MEDICINE AND MENTAL HEALTH

Introduction

Throughout the nineteenth century doctors were at work on the problem of the treatment of the mentally sick. In the first fifty years of the century the habit of treating the bad cases brutally was abandoned. Gradually a psychiatric school of medicine was evolved as more and more doctors were required to manage public institutions. The valuable work of classification, exploration and experimental treatment was carried out by these pioneers. At the same time the philosophers, sociologists, and even the economists, were beginning to isolate the science of descriptive psychology, which was latent in the work of Locke and other philosophers. In the pre-War years the need for a psychological approach to political, social and industrial problems was beginning to be realised.

In 1895 Freud published his first study in Vienna. He was already working towards his vital discoveries in mental science and the evolution of his psycho-analytic therapy. This therapy, by working through the unconscious causes of an emotional maladjustment or neurosis, not only enables the patient to resume his place in society with a more equable emotional outlook, but is designed to prevent further breakdown.

The moral and mental upheaval of the War brought these new studies of the human mind to the fore. Medically, it was found impossible to ascribe shell-shock, from which thousands were suffering, to any organic change or disease, and various kinds of psychological therapy were evolved to treat them. There were, however, few trained men and there were many false starts, but there have developed, nevertheless, throughout the last fifteen years in this country methods of treating cases suffering from disorders which psycho-therapy can remedy, and considerable research organisations have grown up. The repercussions of mental events on health have gradually come to be realised by doctors to be more important. This importance has perhaps been more apparent because of the weakening, through the onset of specialism, of the family doctor, who dealt almost unconsciously with the whole "personality." Moreover, the medical profession is no longer prejudiced towards ascribing every disease to organic change and now holds that many symptoms are of functional origin, i.e. there is no structural damage, but a failure of the organs to operate harmoniously.

The earlier psychiatry isolated the mental defectives from those suffering from mental disorder. Most mental deficiency can be ascribed to an hereditary taint or to some accident or illness before or soon after birth. The extensive provision which the community makes for the mental defectives and for those suffering from serious mental disorder is described in Chapter IX of this Report. Much research has been carried out by psychiatrists and others into mental disorder. The various known mental disorders have been classified, and wherever possible their causes discovered and treatment evolved to deal with them. Certain disorders are known to be due to organic change such as follows infection with syphilis. But, although very valuable work is being done on these lines, the great majority of mental patients suffer from psychoses which are now believed to be functional, i.e. psychogenic diseases. There are also numerous functional mental disorders, many of them of a less serious nature, known as psycho-neuroses. This class, to which most of the shell-shocked cases belonged, can be treated successfully by psychotherapy. They include hysteria, and obsessional, compulsive, character and conduct neuroses. Among the numerous classes of people who can benefit by this treatment are what are more generally known as the problem child, the delinquent, and all those suffering from nervous breakdowns.

Evidence of Prevalence of Mental Ill-health—psycho-neurosis

Many statements have been made concerning the amount of psycho-neurosis prevalent in Great Britain. Unemployment undoubtedly helps to cause numerous breakdowns, although many opinions are given without adequate evidence. But recently a number of inquiries which throw some light on the problem have been conducted. Dr. Halliday, the Glasgow Regional Medical Officer of the Department of Health for Scotland under the Insurance Act, discovered that out of 1,000 consecutive cases kept away from work for 12 weeks or more 33.5 per cent were in what was primarily a psycho-neurotic condition. He showed that the majority of these were certified as suffering from organic diseases including gastritis, debility, anæmia and rheumatism. He estimated that the incidence of psycho-neurosis among the employed males was 28 per cent, while it was 37 per cent among the unemployed. Further, he showed that in one inquiry of 145 consecutive cases described as rheumatic 39.3 per cent, and in another 62 consecutive cases 37 per cent were psycho-neurotic. In a close investigation of the psycho-neuroses of 21 insured persons he established a definite connection between neurosis and rheumatism. Dr. Thomas M. Ling, the Medical Officer of Joseph Lucas Ltd., Birmingham, analysed the case records of 200 consecutive cases of sick employees. He concluded that 27 per cent who were absent for two or more weeks were suffering from psycho-neurosis, while the period during which another 32 per cent stayed away from work was prolonged by psycho-neurosis. A series of articles in the first three numbers of Vol. X of the *Human Factor*, the organ of the National Institute of Industrial Psychology, by Dr. Garland, provides evidence of a similar character obtained from a factory employing between 2,000 and 3,000 girls. Sir Maurice Cassidy, a consulting cardiologist, has also attributed 29.15 per cent of the cases coming to him to psycho-neurotic causes. It is suspected, too, that accident proneness is due to some form of psychological condition. The Industrial Health Research Board, for example, have discovered that 75 per cent of the factory accidents generally occur among 25 per cent of the employees. Thus there are evidently many people suffering from mental ill-health which is never diagnosed. Their health and their work often suffers and sometimes they may be even dangerous to their fellow citizens, particularly if they handle dangerous machinery, or drive cars. It is obvious that more should be known about them, and that preventive and curative measures should be taken wherever it is possible. More knowledge is perhaps the chief requisite at the moment. There are many others who are suffering from diagnosed breakdowns and need treatment.

Provision for the Cure of Mental Ill-health

There is some, but by no means adequate, provision for treating patients suffering from mental ill-health. Similarly, research funds and facilities, although they exist, are sadly deficient if judged by the need for them. Children are dealt with probably most extensively. In London, besides the London Child Guidance Clinic, there are 14 clinics or departments of institutions dealing with neurotic, difficult and backward children, linked to the London Child Guidance Council. Attendance at eight of these is counted by the London County Council as equivalent to attendance at school under Section 80 of the Education Act 1921. There are 22 other clinics outside London in England and Wales, and 9 in Scotland. Eleven of these are organised and run by the local education authorities; for twelve they are partly responsible. The policy of the Board of Education in regard to these clinics is set out in the 'Health of the School Child'—the Annual Report of the Chief Medical Officer of the Board of Education for 1934. This policy is to wait until a new development has shown its worth under voluntary management, to note whether there is a widespread desire for the extension of that development, and then to permit extensions by local authorities in suitable cases which are kept under review. In pursuance of this policy, local education authorities are allowed to run, or contribute to the expenses of other authorities in running, child guidance clinics. These clinics work by a variety of methods including tests to discover the abilities of the child, observation of the child while at play, and consultations with the parents to remove the causes of maladjustment. Attached to these clinics are usually psychiatrists, educational psychologists and social workers. There are about 40 social workers who have received a special psychiatric social workers' training working in Great Britain.

The adult suffering from psycho-neurosis can either go to a consulting psychotherapist or to a psycho-analyst, to one of the teaching hospitals with a psychiatric department or to a private clinic. For serious cases there is the L.C.C. Maudsley Hospital with free wards, wards for paying patients and an out-patients' department attached to it. Run in connection with it are the three North London psychiatric clinics. Some of the London voluntary hospitals also have in-patient and out-patient units devoted to these cases. Thus, the new St. George's Hospital is to include a 60-bed unit for psycho-neurotic cases. There are also private nursing homes and hospitals for these cases such as the Woodside Hospital for Functional Nervous Disorders and the Lady Chichester Hospital, Hove. The British Psycho-Analytical Society, which provides a five-year training course in the Freudian technique, has a clinic attached to it. The Tavistock Clinic, which trains psychotherapists and is not attached to one school of thought, supports a clinic with a small in-patient and a large out-patient department. The Institute for the Scientific Treatment of Delinquency also does therapeutic work. In England and Wales, outside London, there are clinics set up under the Mental Treatment Act 1930 consisting of doctors from the mental and general hospitals of a particular area. But these clinics are almost entirely concerned with classifying cases. Apart from these clinics there is very little provision for cases of psycho-neurosis in the provinces. In Scotland there are several out-patient clinics run by various authorities in connection with mental hospitals and with the Royal Asylums.

The success of modern methods of treatment is difficult to assess. During the War and subsequently, many cures were effected. Individual psycho-analysts such as Freud have also obviously been very successful. But there is little statistical material. However, in the *British Medical Journal*, July 13, 1935 (Vol. II, No. 54), an article appeared under the signature of Mary C. Luff and Marjorie Garrod, showing results of treatment in 500 consecutive adult cases treated at the Tavistock Clinic (then the Institute of Medical Psychology) between October 1928 and December 1931. The cases covered were 70.4 per cent of those treated and included only those who were "followed up." The results showed that on discharge 65.6 per cent had been relieved, and after three years 55 per cent. The largest group of cases were "anxiety states," covering 220 patients of whom 64 per cent were relieved after 3 years. Of these 100 had only 20 interviews; 90, 20-60 interviews, and 30 over 60. These figures show one of the great difficulties of psycho-therapeutic treatment: namely, the time involved.

Teaching

In May 1936 the General Medical Council, as part of a general scheme for a reorganisation of the medical curriculum, passed a resolution giving psychology a defined place in it. After January 1938, instruction "in the elements of normal psychology" must be given in the first two years of the medical course. In the clinical years instruction must be given in psychology, mental disorder and mental deficiency. This will enable general practitioners to acquire some knowledge of the psycho-neuroses which will be of far greater value, as the British Medical Association Committee on Medical Education pointed out, than a knowledge of the psychoses. Already there is a certain amount of general teaching given in psychology. Attached to some medical schools are lecturers in psychiatry. At Edinburgh there are five lecturers. The Maudsley Hospital and the Bethlem Royal Hospital in London provide facilities for clinical teaching and are linked to the University of London for this purpose. To encourage advanced study the Diplomas in Psychological Medicine were instituted after the War. They are awarded by the University of London and by other licensing bodies. The Diploma of the University of London has recently been revised and now covers a study of mental retardation, delinquency and the psycho-neuroses. A much more thorough training based on a study of the psycho-neuroses and of the technique of psycho-therapy is carried out by the British Psycho-Analytical Society and the Tavistock Clinic.

Research

Research work in psycho-pathology is very scanty. Academic psychology is studied at most universities. There is, for example, a Psychological Department at Cambridge, with a Professor, a Reader and an Assistant Director of Research, but its work has little relation to psycho-therapy. Such societies as the British Psycho-Analytical Society and the Tavistock Clinic do research work in psycho-pathology and psychiatry. At the Maudsley Hospital and some mental hospitals, work of this kind is done. The Medical Research Council also has a committee studying mental disorders and sometimes makes grants for special inquiries. Valuable work is done, moreover, by practising psycho-analysts and psychiatrists. For example, therapeutic work like that which is being done at child guidance clinics and at Wormwood Scrubs by the half-time psychiatrist may also be very useful in opening up new lines of research. Industrial psychology has attracted considerable attention and there is a chair of Industrial Medical Psychology in London. The National Institute of Industrial Psychology carries out useful surveys of, for example, accident proneness and the value of psychological tests. There is a special committee of the Industrial Health Research Board studying Industrial Psychology.

Conclusion

At the moment very little money is devoted to research in psycho-pathology and psychiatry compared with the endowments for research in organic medicine and surgery, yet the need is no less great. For without it little progress can be made in the treatment of either the psychoses or the psycho-neuroses. Moreover, it may throw valuable light on other special evils. More money is also essential for the training of doctors in psychotherapy, for it entails much expensive post-graduate work. A thorough training by the British Psycho-Analytical Society takes five years. Without an adequate supply of trained men and women, to extend the existing services is useless. Research fellowships in psychotherapy should, therefore, be created at the medical schools and universities. To encourage doctors to undertake work which can never be as remunerative as, for example, surgery, paid posts should be created at various institutions. For example, the London voluntary hospitals might appoint psychiatric registrars in the same way as they appoint surgical and medical registrars. The existing institutions and experiments, such as the child guidance clinics, should be extended, and the efforts of the Tavistock Clinic to build up a teaching hospital for psycho-neurotic cases should be furthered.

In Chapter III, dealing with Industrial Health, considerable reference has been made to the neuroses in relation to industry. In that chapter the individual is being considered in relation to his social environment, if only one particular aspect of it, and the neuroses are social diseases. They are to be found quite as much in relation to school or home environments. The maladjustment they cause helps to justify the necessarily long treatment involved in their cure. It would also justify the expenditure of very much larger sums of money in research work concerning them. It is perhaps not the place here to pursue the subject of how far the neuroses are responsible for much of the crime and violence which have not been banished from society. But it is obvious that research work into these subjects and the means of eliminating them is needed. Moreover, research work on these lines will probably yield a rich harvest in the field of education, since it will throw light on the education not only of the abnormal but the normal child. It is perhaps also not too much to hope that it will help to unravel some of the emotional maladjustments which disturb the social and political life of modern civilised societies. Certainly at least, research work of this kind should be linked to the work of educationalists and sociologists.

HEALTH EDUCATION

Introduction

It is essential that in a democracy the ordinary individual should be able to criticise the technicians he employs, whether in his private capacity or in his public capacity, as a ratepayer or a Parliamentary voter. Nor can the doctors and scientists themselves carry on their work of promoting health and of preventing and curing disease without the intelligent co-operation of every individual. As stress is laid more on preventing disease and on attaining an even higher standard of health than on the business of curing disease, this is likely to become more and more true. Improvement, for example, in nutrition depends in part on the co-operation of every housewife. Improvement in the mental and physical welfare of every child depends in a very large degree on the active work of intelligent parents.

Much of contemporary health educational work does not advocate healthy living, but is directed to educating the public about particular diseases; this, if over-stressed, may be unfortunate, as tending to lead to hypochondria. It is, in fact, necessary to work for something like the Greek conception of life, which did not make a sharp distinction between the spiritual, intellectual and physical spheres of life, but saw them as all part of one "whole." The Greek youth was not trained as an athlete because muscular strength was good in itself, but because athletic ability contributed to the complete harmony of mind and body. Little, however, is done to encourage this kind of idealism. Yet more is known to-day about the means of implementing this ideal than ever before. Biological and psychological studies have opened up vast new perspectives of human possibilities, but progressive developments are hindered by the inherent conservatism of the human race and by the failure of the ordinary citizen to think. An understanding of physiology is by no means beyond the range of intelligence of the average citizen. Physiological studies can also be linked to athletic interests and to almost every aspect of human life. The following paragraphs summarise very briefly the existing provision for health education of the public, as distinct from medical and other professional training which are dealt with elsewhere, and Physical Education which has been discussed in the foregoing chapter.

The Mothers

Pregnant women who seek medical advice under maternity and child welfare schemes are given individual instruction according to their needs. Frequently informal talks are also given to expectant mothers at the clinics. Again, instruction is given to nursing mothers; among other things exhibits, films and clothing suitable for infants are shown. Yet in 1936 only 48.85 per cent of expectant mothers in England attended ante-natal clinics. In addition, arrangements were made by local authorities for the medical supervision during pregnancy of some mothers who were out of reach of the clinics; and, of course, a number of expectant mothers make their own private arrangements for medical advice. About 60 per cent of the children under one year of age attended maternity and child welfare centres, and some at any rate of the balance can hardly be accounted for except by lack of health education among the parents, in spite of the fact that a health visitor calls at every home where a birth is notified.

The Schools

The importance of nursery schools in the training of children in good habits, particularly when their homes are bad, can hardly be over-emphasised. Moreover, the educational value of these institutions extends to the parents who send their children there. Unfortunately, as shown in Chapter IV, they only cover a small minority of the child population.

The schools under the local education authorities also assist in health training and education by example, so far as they can. The Committee on the Scottish Health Services pointed out the futility of talking of the value of fresh air in ill-ventilated classrooms and of the merits of cleanliness if the school washing facilities are primitive. The Committee stated that, in infant departments, work on promoting the right outlook to health had progressed very much further than in the departments where examinations began to have their corrosive influence. For children between seven and eleven it is considered that a formal health education is unnecessary, but interest in health subjects can be introduced in connection with history, citizenship and physical education, and above all, nature study. This, of course, can be continued when it is formally incorporated in a biological course. Domestic science courses also assist in health education.

The necessity for spacious, airy buildings, surrounded by trees and attractively furnished and decorated, is apparent in schools of almost all types. Open-air schools afford invaluable opportunities for health education. Among other things pets can be kept, and they can be made the subject of lessons on health, the need for regular feeding, sleep and cleanliness. At Wytham, near Oxford, there is a residential open-air school, with a swimming-bath, for London, Oxford and Berkshire children.

Considerable space is devoted to these problems in 'The Health of the School Child,' the Board of Education's annual health report. In 1933 a new edition of suggestions on health education was issued for the guidance of teachers and the old subject of Physiology and Hygiene in the elementary schools is being modified. School medical officers and dental officers make efforts to explain their work, and they organise lectures, films and demonstrations. Yet much remains to be done. The men, for example, who go to teachers' training colleges, have a knowledge of elementary physics and chemistry, but know little or nothing of physiology. It is essential that they should gain this knowledge, and that it should be linked to their study of physical training. At the moment also, sex education is hampered by ancient taboos, although some education authorities are encouraging their teachers to give some instruction in the biological and nature study courses.

General Health Education

Voluntary organisations, such as boys' and girls' clubs, Junior Red Cross societies, Boy Scouts and Girl Guides, assist in the work of health education, and might do even more than they do now in the education of the adolescent. Local authorities assist health education by part-time cookery classes and part-time educational work. They have power o spend funds directly on promoting health education and propaganda, and they do a considerable amount of work. If insurance committees have a credit in their general purposes funds, they are also permitted to spend something on health education. Further, the Ministry of Health has a statutory duty to take measures to secure the spread of information on health matters. The Dental Board also promotes hygiene by organising demonstrations and carrying out a considerable amount of propaganda work.

In England and Wales the Central Council for Health Education acts as a co-ordinating agency for all bodies and persons interested in health education. The Minister of Health, the County Councils Association, the L.C.C. and other official bodies, are represented on it, together with the British Medical Association and a large number of voluntary societies and organisations concerned with health matters. It provides posters and films of educational value. It issues also an invaluable handbook on the means of getting lecturers and others for health talks, and on the work of all its affiliated organisations. It helps to organise local "health weeks" and health exhibitions. The Committee on the Scottish Health Services considered its work so valuable that it recommended the setting up of a similar body in Scotland to assist the Department of Health in its work.

The British Social Hygiene Council, while working for the prevention of venereal diseases, directs its main efforts to the education of parents, teachers, youth leaders and adolescents as to the proper place of sex in life. The British Red Cross Society, by encouraging an interest in nursing and first aid, helps to spread interest and education in health matters. A great deal is done also in factories by posters, propaganda and lectures, particularly if there is a peculiar health hazard connected with the industry. The Industrial Health Education Society devotes itself entirely to this work. The National Council for the Prevention of Tuberculosis specialises in the field indicated by its name. All these bodies are represented on the Central Council for Health Education.

The Empire Marketing Board secured sites and put up frames for poster advertising all over the country, and when it was dissolved in 1933 these frames were offered free of charge to the site owners, mostly local authorities. Many took advantage of the offer, and substantial numbers are still used for health posters, notably those issued by the Central Council for Health Education. Others, however, are neglected or have been diverted to commercial use, and no less than 56 local authorities refused to accept the frames at all.

Four of the county borough councils on Merseyside employed jointly for a number of years a full-time lecturer and organiser of health education. Unfortunately, however, despite his valuable work, he has ceased to be employed as a result of the economy cuts of 1931.

On September 30, 1937, the "Use Your Health Services" campaign was launched by the Prime Minister. The central direction of this campaign has been entrusted to the Central Council for Health Education, with the assistance of Government money, and it is being conducted locally by the local authorities. Its aim is to draw the attention of the public to the health services of every kind, in order that fuller knowledge may lead to fuller use. Every medium of modern propaganda is being used. The help of the Press has been enlisted, suitable films have been prepared, the B.B.C. has co-operated, posters have been displayed prominently in many places, and hundreds of local meetings have been arranged, many in conjunction with Health Weeks and exhibitions. October was devoted to bringing the general ideas of the campaign before the public. The maternity and child welfare services next received prominence in November and December, the school medical services in January 1938, and in February the services available to adults and adolescents, in particular those relating to tuberculosis and venereal diseases. In March the National Advisory Council for Physical Training and Recreation is intensifying its appeal for physical fitness. A campaign is also being organised in Scotland in which not only are the public to be urged to use their health services, but they are to be educated on matters concerning nutrition and the prevention of infectious diseases. At the same time, the National Advisory Council for Physical Training and Recreation is making efforts to interest all ages and all classes in a particular aspect of a healthy life.

Of vital importance in this campaign is the public relations work of the departments concerned. The Ministry of Health has been particularly careful to develop contacts with the public and the Press. In the first chapter, entitled "The Ministry and the Public," of its annual report for 1936, the Ministry states: "It is the constant effort of the Department to explain its operations in plain language and avoid as far as possible the laboured obscurities and tedious circumlocutions of "officialese"; documents are scrutinised from this standpoint when in draft or undergoing revision."

Care is taken to give journalists every facility in Whitehall, and when the Minister is on tour, for learning about the Ministry's work. The Board of Education has an efficient Public Relations Department, and the Scottish Office, which includes both the health and education departments, also keeps in touch with the public and the Press.

Conclusion

It remains true, however, that local authorities have not developed their contacts with the public as far as they might do, although it is to be hoped that the "Use Your Health Services" campaign will encourage them to take the public more into their confidence. Medical Officers of Health, for example, might prepare their annual reports in a more suitable form for digestion by journalists and the public. It is equally true that government departments and local authorities can never afford the almost fabulous sums which advertisers of commercial goods expend to woo the public. Thus, on Press advertising alone, over £5 million was spent in the British Isles in 1936 by the manufacturers of patent medicine and toilet requisites and soaps (£2½ million was spent on patent medicines alone). Nearly another £½ million was spent on advertising baby and invalid foods. The spending of these sums shows what great value persons inspired entirely by the profit motive set on the education of the public.

THE PIONEER HEALTH CENTRE, PECKHAM

Purpose

The Pioneer Health Centre at Peckham is both a medical and social experiment, based on the assumption that one without the other would not yield results. On the medical and scientific side it is designed to discover the medical condition of an unselected and yet typical section of the urban population in an artisan district in South London. Further, it is proposed to investigate what in fact constitutes good health, how far it is enjoyed by the section of the population under review and what measures can be taken to prevent the deterioration of the health of an individual. To facilitate these objects the social aspect of the Centre has been developed. It provides a meeting place for the families under review and it enables the medical staff to observe them in their social surroundings. It in fact enables material for observation to be collected. Out of the conditions for observation demanded by the doctors has grown a new social experiment. For the doctors wished to observe the family as the unit in which the health of the individual is inextricably bound up. Consequently, a club or a social centre catering for the needs of all members of the family from the infant in arms to the father, has been created. This development has afforded opportunities for discovering the effect of congenial social surroundings, with facilities for satisfying social, physical, intellectual and artistic needs, on the health of the individual. It has also filled a very important gap in the social needs of the neighbourhood. For, as the founders of the Centre discovered early in their investigations, the social isolation, particularly of the women in the area, was having a disastrous effect on their health and morale.

The first Pioneer Health Centre was opened at Peckham in 1926 to conduct a preliminary investigation. The results of that investigation were published in "The Case for Action" by Dr. Innes H. Pearse and Dr. G. Scott Williamson in 1931, and a plea for support for continuing the experiment was made. In response to the appeal the new Pioneer Health Centre Ltd. was founded and the building opened in May 1935. The design is interesting, the whole building being grouped around the swimming bath, along the sides of which, but separated from it by a glass partition, is some of the main space for the social activities of the Centre, such as dancing. There is also on the ground floor a gymnasium with a stage and a floor which can be used for dancing, and at the other end of the building a cafeteria. On the first floor are rooms for other activities such as lectures, and the doctors' consulting rooms and the laboratories. Membership of the Centre is confined to families, but a fiancé(e) of a member of a family unit is allowed to join. Membership is also confined to persons resident in a strictly defined area. In this way membership of the Centre is restricted to the naturally mixed population of the area round the Centre, and it is not swamped by families and individuals interested specifically in swimming, dancing, dramatics or gymnastics.

Medical Surveys

When a family joins the Centre every member of it undergoes a series of laboratory tests to ascertain his or her height, weight, blood count, blood analysis and other valuable scientific data. There follows a personal medical overhaul by one of the doctors. Finally, the members of the family and the doctors who have been responsible for their overhaul meet together for discussion. Treatment is not given at the Centre if anything is found to be wrong, but advice as to how to obtain it is, of course, afforded. The Centre therefore co-operates with the local general practitioners and hospitals and has been successful in establishing good relations with them. Periodic medical overhauls are instituted. Besides these overhauls and consultations, others are held. There may be a pre-marital consultation, examinations during pregnancy and consultations after confinement. In the survey of 1,666 individual members of 500 families only 144 individuals and 17 babies had no diagnosable disorder, 1,505 had something wrong with them, but very few were under the care of a doctor. There were 57 cases of kidney disease, only 9 under care of a doctor, and 44 cases of disorders of carbohydrate metabolism (incipient or established diabetes) of whom only one was attending the doctor. There were 17 cases of cystitis, 7 being unsuspected, and 62 cases of heart disease, of whom only 4 were attending their doctor.*

The doctors at the Centre are convinced, therefore, that there are a great many latent disorders unrecognised among the greater part of the population. They explain the failure of the individuals concerned to seek treatment as due to to their reluctance to fall out of their social niche, their work, their family life and their recreations. These people only go to the doctor or the hospital when they have in their own opinion lost their social capacity. In fact, the ignorant patient is the first diagnostician of his own disorder and his judgment is based not on any knowledge of the physiological and pathological implications of any condition, but on its effect on his work and life. This they maintain influences the medical service, which aims, therefore, at overcoming the social disability rather than the pathological condition which causes it.

The doctors at the Centre have also discovered that a large number of persons who appear both to others and themselves in perfect health, and describe themselves as such, are often suffering from a cryptic disorder to overcome which they may be calling into play organs that would not ordinarily be used for this purpose. As a result they are apparently well. But there is the certainty of a breakdown in the future.

There was one case, for example, of an obese blacksmith who possessed all the cheerfulness of an exuberant well-being. He weighed fourteen stone (height 5 ft. 7 ins.), had a blood pressure of 260 and a red cell count of 6½ million with a hæmoglobin of 17.8 grammes. The primary disorder arose because he ate to suit his appetite, which was governed by the use of a few highly specialised muscles used in his craft. This set up a train of compensatory efforts by the body which would have led eventually to disaster, probably in this case due to the high blood pressure. The only other attempt to correlate information such as that which is being dealt with at Peckham is at the James Mackenzie Institute for Clinical Research at St. Andrews, whose work, however, is not carried out in conjunction with a social centre.

Some Activities

The social activities of the Centre afford the doctors an immense field for observation. About 505 families completed their medical overhaul by December 31, 1936, and 390 of these, representing 1,300 individuals, maintained their membership at that date. Activities ranging from swimming, diving, fencing and boxing to a dance band, discussion circle and dressmaking are carried on. The staff encourage but do not attempt to demonstrate or lead these activities. A qualified gymnast and swimming instructor are employed. Beyond the family subscription there is no extra charge to children under 16 for use of any of the apparatus. A nursery is run for infants between 2 and 6, where the mother can put her child with companions of the same age. It can obtain there exercise in the gymnasium with the use of special apparatus designed for small children. School children generally come after 4.30 p.m., and of the 338 possible attendants 226 come regularly, 87 fairly often and the remaining 25 very rarely. There are facilities for swimming, billiards, darts, cricket, roller skating and other activities. The Centre also possesses a country camp in Kent, and it has recently been presented with a farm which it is about to utilise.

---

* Annual Report 1936 of the Pioneer Health Centre Ltd., St. Mary's Road, Peckham, S.E.15. An Interim Report setting out in detail the scientific and other work of the Centre is to be published shortly.

It has been noticed that the children,, while they are extremely keen to make extensive use of the apparatus in the gymnasium, are in no way attracted by the chance of professional instruction. Among the adults, especially the men, there is also indifference to the professional instruction provided. But the swimming bath is extremely popular. It is suggested that these observations on the entirely non-specialised membership of the Centre will yield interesting results in discovering what the ordinary man, his wife and his children want to do, can do, and what effect the satisfaction of their wants has on them.

Conclusion

The Pioneer Health Centre is an extremely interesting scientific and social experiment. If affords opportunities for studying both the physiological and psychological conditions of a large unselected group of urban dwellers. All aspects of their life and all their various relationships can be observed in the social setting of the Centre. The effect of these on their health and outlook to life can be noticed and interesting conclusions drawn. The family membership of the Centre is a vitally important part of its work. The attempt to break down the isolation of the urban wife's life, stimulate her interest in her children while affording her opportunities to escape from the continuous care of them, is no less important. At the same time, her husband is enabled to share the social activities of his wife and children at the same centre. Peckham, in fact, provides a vast amount of material for scientific observation which is being correlated by the doctors on the staff, and it is also a vitally interesting social experiment.

XIV. ADMINISTRATIVE EXPERIMENTS

The Highlands and Islands Service: History—Medical Service—Nursing Service—Hospitals and Specialists' Services—Conclusion—Finance—**Gloucestershire Medical Services Scheme.**

In this chapter we review two experiments in the organisation of medical services, one in an area with peculiar features, the Highlands and Islands, the other in a typical English area, mainly rural but containing several urban communities.

THE HIGHLANDS AND ISLANDS SERVICE

History

On account of the conditions existing in the north and west of Scotland and in the neighbouring islands, special measures have had to be introduced to provide a comprehensive medical service which would comply with modern standards. The lack of medical provision in the Highlands and Islands was graphically described in 1850 in a report of the Royal College of Physicians of Edinburgh, which found that on the west coast of Sutherland with a population of 5,000 and a length of 60 to 70 miles, there was only one doctor, and in Lewis there were only three. Many people consequently were out of reach of medical aid. Others could not afford it, since doctors' fees were necessarily high, for it sometimes took days to reach a case. Many others obtained medical services and never paid for them. The doctors were poor and overworked, although many of them served their arduous practices with heroism and devotion. Nor had conditions changed much in 1909 when the Royal Commission on the Poor Law reported. Consequently, when the National Health Insurance Scheme was introduced in 1911, it was realised that the crofters, cottars and fishermen would not benefit by it, but that something must be done for them. Therefore a committee was appointed in 1912 to inquire into the conditions in these areas and to suggest a method of meeting their medical requirements. As a result of the committee's report, the Highlands and Islands (Medical Service) Grant Act 1913 was passed, but it had little effect until after the War. Under that Act the fund received an annual grant of £42,000, but in 1929 a further Act was passed—Highlands and Islands Additional Grant Act—authorising the payment into the fund of such additional sums each year as might be voted by Parliament for the purpose. At present the combined grants amount to something in the neighbourhood of £70,000 per year. A further payment of £10,000 is made from the National Health Insurance funds in respect of mileage allowances which would normally go to insurance practitioners.

The Highlands and Islands Medical Service Fund is administered by the Department of Health for Scotland. It is used to supplement and improve the existing services whether they are run by private practitioners, voluntary organisations or local authorities. Fortunately for the Highlands and Islands, the scheme approved by the Treasury for the administration of the fund allows payments to be made for a very wide variety of services.

Medical Service

In the financial year ending March 31, 1936, £47,087 0s. 1d. was paid from the fund for medical services. This was mostly distributed in grants paid to doctors, on the condition that they charge modified fees to patients entitled to the benefits of the scheme, irrespective of the distance travelled by the doctor to the patient. The persons entitled to the modified-fee medical service are "The families and dependants of insured persons, uninsured persons of the cottar and crofter classes and their families and dependants, and others in like circumstances to whom the payment of the practitioners' ordinary fee for medical attendance would be an undue burden." The maximum fee for ordinary medical attendance is 5s. for the first visit and 3s. 6d. for each subsequent visit in the same illness. Modified fees also apply to midwifery cases, the giving of anæsthetics, certain major and minor operations, complications of pregnancy, and the setting of fractures.

The grants from the fund paid to individual doctors are usually determined by the amount of work as measured by the travelling involved in attending beneficiaries under the scheme. If this method of calculation does not produce an adequate income for the doctors, grants are calculated with regard to the net income of the practice. The doctors are always panel practitioners, and, in most cases, are also medical officers employed by the local authority in connection with statutory health duties.

Conditions of life have been improved for the doctor since he can now make use of a car or motor-boat. Moreover, grants have been made from the fund for building and improving the doctors' houses and for providing a *locum tenens* during the holidays.

Evidence of the improvements effected by the service was provided in plenty to the sub-committee of the Committee on the Scottish Health Services which examined the provision of medical services in this area. For example, the proportion of uncertified deaths to all deaths in the Highlands and Islands has declined from 10.54 per cent in 1911-13 to 4.51 per cent in 1931-33. The proportion for all Scotland has declined in the same period from 1.80 per cent to 0.47 per cent. The percentage in some parishes over a period of years was found by the Dewar Committee in 1912 to be as much as 80. Such conditions can, of course, no longer exist. Moreover, more highly qualified men are attracted to service in this area than was formerly the case, and there are usually many such applicants when a vacancy arises.

Nursing Service

The Department of Health has made great and successful efforts to improve the nursing services in the area. Grants are made to the voluntary associations which run these services. Nearly two hundred nurses are now employed in the area, and their qualifications are of a higher standard than formerly. The co-operation between the doctor and the nurses is very close, and doctors stated to the subcommittee mentioned above that practice in their areas would be impossible without the services of a nurse. She attends at the periodical school medical inspections and does what follow-up work may be arranged. She is present at almost all confinements as a maternity nurse or as a midwife. One of the most valuable functions the nurse performs is in the health education of the people in her area. The fund has also improved the conditions of life of the nurses by making grants for the improvement of their houses. Conditions have in fact been revolutionised as a result of setting up the fund, since, prior to its creation, the supply of nurses was "miserably inadequate." Nevertheless, the Committee on the Scottish Health Services concluded that there was a great need for additional nurses, that they should be provided more frequently with motor cars and that refresher courses should be available for them.

Hospitals and Specialists' Services

The Royal Northern Infirmary at Inverness, with the assistance and co-operation of the department, has been developed to provide a modern hospital for the mainland. In Zetland, Orkney, Caithness, Sutherland, Lewis and Lochaber, there are resident surgeons whose emoluments are augmented from the fund. There are also cottage hospitals in various parts of the Highlands and Islands which have been considerably improved. At one place there is a hospice where patients on their way to and from hospital can await train or boat connections. The subcommittee of the Committee on the Scottish Health Services advised that centralisation should be encouraged and suggested that before a local institution was provided, consideration should be given to extending the larger institutions such as the Royal Northern Infirmary. In this respect they considered the development of the air ambulance service would prove valuable. They advocated that at any rate additional hospital facilities should be provided in the area and that better provision should be made for dental and ophthalmic services. In order to obtain these services many of the inhabitants have to travel long distances, entailing absence from home of one or two days, and, in extreme cases, longer.

Grants from the fund also go to improve the air ambulance service, the wireless communications, and the telephone services of the area, and considerable assistance is given to the special tuberculosis scheme.

The Committee on the Scottish Health Services considered that the local authorities' tuberculosis, venereal diseases, maternity and child welfare and school medical services were often inadequate, and that they were unco-ordinated with the services mainly assisted by the fund. This inadequacy was partly due to the poverty of these authorities. Consequently the committee advocated what they described as an extended application of the administrative methods of the Highlands and Islands Medical Service. Co-ordination and improvements of the kinds they advocated would, they hoped, remove these barriers. To effect these, some financial adjustments might be necessary.

The general Exchequer contribution formula attempts to adjust differences between the rateable value of particular areas by giving a higher grant to authorities in an area with a low rateable value and high administrative costs than to more fortunate areas. But this affords little help to the Highlands and Islands authorities, since the rateable value of their areas is so appallingly low. For example, a 1d. rate in Orkney produces £190, and in Midlothian £2,188. The committee suggested that some remedy should be found and that the best would be to give a single grant to the Highlands and Islands (Medical Services) Fund to enable them to assist and persuade local authorities to make improvements. To effect these improvements, to co-ordinate the medical services in the area and to carry out extensions that were considered necessary, the committee recommended that £50,000 a year should be added to the Highlands and Islands grant.

Conclusion

All authorities are agreed that the setting up of the Highlands and Islands (Medical Services) Fund has been an inestimable boon to the populations concerned. It has vastly improved the medical and nursing services and strengthened the hospital services in the area. The co-ordination of the services of doctor and nurses, the use of modern methods of communication and the tentative development of a centralised hospital system are object lessons to other parts of the country. In fact, the scheme has become a model for the development of a health service in a sparsely populated area where communications are extremely difficult.

Finance

The following summary setting out the application of the fund to different services is taken from the Eighth Annual Report of the Department of Health for Scotland, 1936.

Payments were made to medical practitioners, nursing organisations, hospital managers and local authorities as summarised below:

Medical Service

Practices for which grants were paid under the Highlands and Islands scheme of medical service at modified fees	151
Practitioners receiving grants in lieu of insurance mileage grants	27
Practitioners for whom substitutes were provided during absence on leave	27
Special arrangements for particular districts and islands	7

Nursing Service

Grant-aided nursing organisations (including five county associations or federations)	31
Nurses employed (excluding relief nurses)	200

Hospitals and Ambulances

Hospitals receiving grant	4
Ambulance committees	3

Special Services

Number of specialists in respect of whom grants were paid	6

The financial position of the fund in the year ending March 31, 1936, was:

Income	£	s.	d.
Balance on April 1, 1935	100	1	3
Grant-in-aid (1935-36)	70,000	0	0
Amount transferred from Scottish National Health Insurance Fund in respect of mileage	10,000	0	0
	£80,100	1	3

Expenditure

	£	s.	d.
Medical service	47,087	0	1
Nursing service	18,517	2	2
Hospital and ambulance services	5,542	18	9
Provision, improvement and maintenance of doctors' and nurses' houses	848	4	10
Specialist services	2,714	14	4
Extension of telegraphs and telephones	241	19	6
Special emergency scheme	13	2	6
Special tuberculosis scheme	3,157	5	0
Balance at March 31, 1936	1,977	14	1
	£80,100	1	3

GLOUCESTERSHIRE MEDICAL SERVICES SCHEME

The Gloucestershire Medical Services Scheme is notable, not only for its contribution to a solution of the hospital problem, but for the way in which all the agencies concerned in health matters have been combined, or at any rate partially combined. The compartmentalism and divorce of one service from another which followed the creation of the statutory services has thus been partially reversed and a reintegration secured. The arrangements extend over the whole county area and the County Borough of Gloucester, and they include the utilisation of institutions outside the boundaries of these authorities. The smaller local authorities, the urban district councils and the rural district councils also co-operate. Co-operation with the medical profession is secured by the election of a medical advisory committee by the staffs of the hospitals and by the general practitioners on the rota of the outstations. The chairman of this body is co-opted a member without a vote of the Medical Services Committee of the County Council. This committee, which administers the scheme, includes representatives of the public health, maternity and child welfare, tuberculosis, education and public assistance committees. Co-operation with Gloucester County Borough Council is maintained. There is a joint committee for tuberculosis.

The purpose of the scheme is, as the county medical officer has stated, "to co-ordinate the work of the general practitioners, the hospitals and the nurses in the locality for the public benefit . . . that within this scheme of co-ordination the county should be divided into hospital areas; that all the services for the medical care of the public . . . for example, maternity and child welfare centres, tuberculosis dispensaries, medical treatment of school children, etc., should be conducted in one centre instead of at different places within the same area." Outstations have been set up for carrying out this purpose and the institutional services are being properly developed. It was intended to arrange for the extended treatment of insured persons and for promoting research, but little has yet been done on these lines.

Within the county area four hospital regions have been roughly mapped out, centring on the four general voluntary hospitals. The Cheltenham general hospital area contains the Cirencester sub-district, from which area, owing to its situation, patients are sent to the Radcliffe Infirmary in Oxford, although that is not one of the co-operating hospitals. There are 28 outstations scattered over the whole county area co-operating with their respective general hospitals. These outstations include the four out-patients' departments at the general hospitals. Twelve are in cottage hospitals, and others in a variety of institutions such as old tuberculosis dispensaries and old Poor Law infirmaries. Some have been placed in buildings especially erected for the purpose. These outstations are particularly valuable in sparsely populated areas such as some of those in the country. The utilisation of the outstations for all classes of treatment, including tuberculosis treatment, and in connection with the school medical and dental service, and maternity and child welfare work has proved very successful.

The local general practitioners, recommended by the Medical Advisory Committee, serve at the outpatient stations in rotation when there are more than one of them in any area, and are paid a regular fee for each session. Generally no patients who do not come under statutory arrangements are treated at the outstations unless they come with a letter from their family doctor. This, of course, facilitates co-operation of the medical profession.

The close contact which the specialists and consultants maintain with the outstations, where some of them in fact work, lends interest to the general practitioner's task. Except where the outstations are at hospitals the district nurses are in charge of the nursing arrangements, and this affords them additional experience and interest. Co-operation through the visiting consultants is maintained with the special institutions such as the tuberculosis sanatoria, the special hospitals and the convalescent homes.

The county council has assisted the voluntary cottage hospitals to finance some of their improvements. Thus, the Hospital Committee at Berkeley borrowed money to build an out-patient department, a maternity ward and a nurses' room, and the county council agreed to pay the interest and instalments of the principal over a period of thirty years. The extension becomes the property of the hospital at the end of that time.

Although the scheme operates in a largely rural area, it illustrates the lines along which a solution of some problems connected with hospital administration can be found. It shows how the work of the general practitioners can be related to the statutory services. Moreover, it affords an illustration of how the medical profession and the local authorities can co-operate more closely to promote the health of their area and to bridge the gulf between official and unofficial health services which is so frequent and so unsatisfactory a feature of the present situation in Great Britain.

XV. THE EXTENT AND COST OF ILL-HEALTH

Are We Getting Healthier? Longevity—Mortality at Successive Ages—Infants—Children—Adults—Mortality in Different Parts of England and Wales—**Incidence of Sickness**—Notifiable Diseases—Health Insurance Records—School Children—**The Cost of Ill-health**—Preventive Services—Conclusion.

In previous chapters use has frequently been made in various contexts of statistics regarding the extent and cost of ill-health. The purpose of this chapter is to review statistical material as a whole in order to throw some light on the questions whether the nation is getting healthier and what ill-health costs.

ARE WE GETTING HEALTHIER?

The nation's health may be considered from three aspects:

(1) Longevity and the incidence and causes of premature death;

(2) Incidence and nature of sickness;

(3) General physical condition, apart from recognised illness.

A great deal of data is available on the first aspect and its relative importance is inclined to be overrated in consequence. There is so far no satisfactory statistical material upon the general physical condition of the population apart from recognised illness.

All the figures in this section refer to England and Wales as the statistical material for Scotland is separately compiled, and it is not practicable to work out figures for Great Britain as a whole.

Longevity

Although the chances of surviving to a ripe old age are steadily improving, the length of the natural span of human life does not appear to have increased appreciably in recent years. In 1871 a man of 75 might expect to live for another six years, in 1901 for six years and one month. In 1921 such a man might look forward to six years and seven months of life, but by 1931 the prospect was reduced to six years and five months. For women the increase over the half century 1871-1921 is from 6½ to 7½ years, but here again the trend has been reversed in the last decade.

A misleading impression of increased longevity is given by the continually increasing numbers in extremely high age groups beyond the usual length of life. This, however, is simply due to the fact that the survivors who reach these ages were born during a period when births were increasing rapidly and thus the same proportions produce a continually increasing number of survivors. Ages above 85 were not separately distinguished in censuses before 1931. But deaths of alleged centenarians have been recorded every year during the century. They have risen from an average of 57 in 1901-5 to 95 during the last five years, but the population over 85 is approximately doubled. Actual ages were recorded for 1913 onwards. The highest in the great majority of years was 106, and does not appear to be rising. The proportion of women amongst centenarians seems to be increasing.

The natural length of human life appears to remain fairly steady at something between 75 and 85 years. Yet the proportion of deaths over 75 which were definitely attributed to old age was only 36 per cent in 1901 and by 1936 it had fallen to 11 per cent. This is almost entirely a question of diagnosis. We may expect to see the category practically eliminated eventually, but old people die just the same. For this reason the age factor must be constantly born in mind when statistics of deaths are used as indices of the prevalence of any disease, if that disease affects the aged.

Mortality at Successive Ages

Generally speaking, mortality rates decline very sharply from birth till the age of 10 or 11, and thereafter steadily rise.

Since the beginning of the century mortality rates have fallen at all ages below 75 (80 for women), but the proportionate fall has been very different at different ages, and the curve is much less smooth now than thirty years ago. In 1901-10 it could broadly be said that the chances of dying within a year were doubled every ten years, rising from 1 in 500 at age 10 to 1 in 4 at age 80 and 1 in 2 at 90. Now the chances for males are doubled between 11 and 18; from 20 to 30 they remain almost exactly constant (at about 1 in 300); from 30 to 55 they are doubled every eleven years, and from 55 onwards, every eight years. The dangers of the early twenties are very much less for females, the difference being mainly due to accidental deaths. In 1935 1,761 men of 20-30 were killed in accidents, and only 284 women.

The greatest proportionate fall in death rates has occurred between the ages of six months and four years, where they have been reduced to about one-third of their 1901-10 level. The improvement in childhood has affected girls more than boys, in 1901-10 the female death rate was higher than the male from 4-14, but now it is lower at all ages.

Figure 7 shows the death rate by ages for both males and females in the decade 1901-10 and in the three years 1930-32. The horizontal scale is age at death, and the vertical scale deaths per 1,000 living at that age. The plain lines are males and the broken lines females.

Infants

Surprisingly little improvement has occurred in the death rates of very young babies. In 1906-10, out of every 1,000 born 11.6 died within a day. In 1935 the figure was 10.7. Figure 8 shows the decline during the last thirty years of the death rates at various stages of the first year of life. The rate in 1906-10 for each age period is taken as 100. It will be seen that there has been very little improvement during the first week, and from 1923-33 there was actually a retrogression. On the other hand, during that decade the rate during the second week was falling steadily, and is now less than two-thirds of the 1906-10 level. The rate from 2-4 weeks has fallen continuously during the century and has been halved, but the greatest improvement has occurred at ages over one month, where the rate has been reduced by 60-70 per cent.

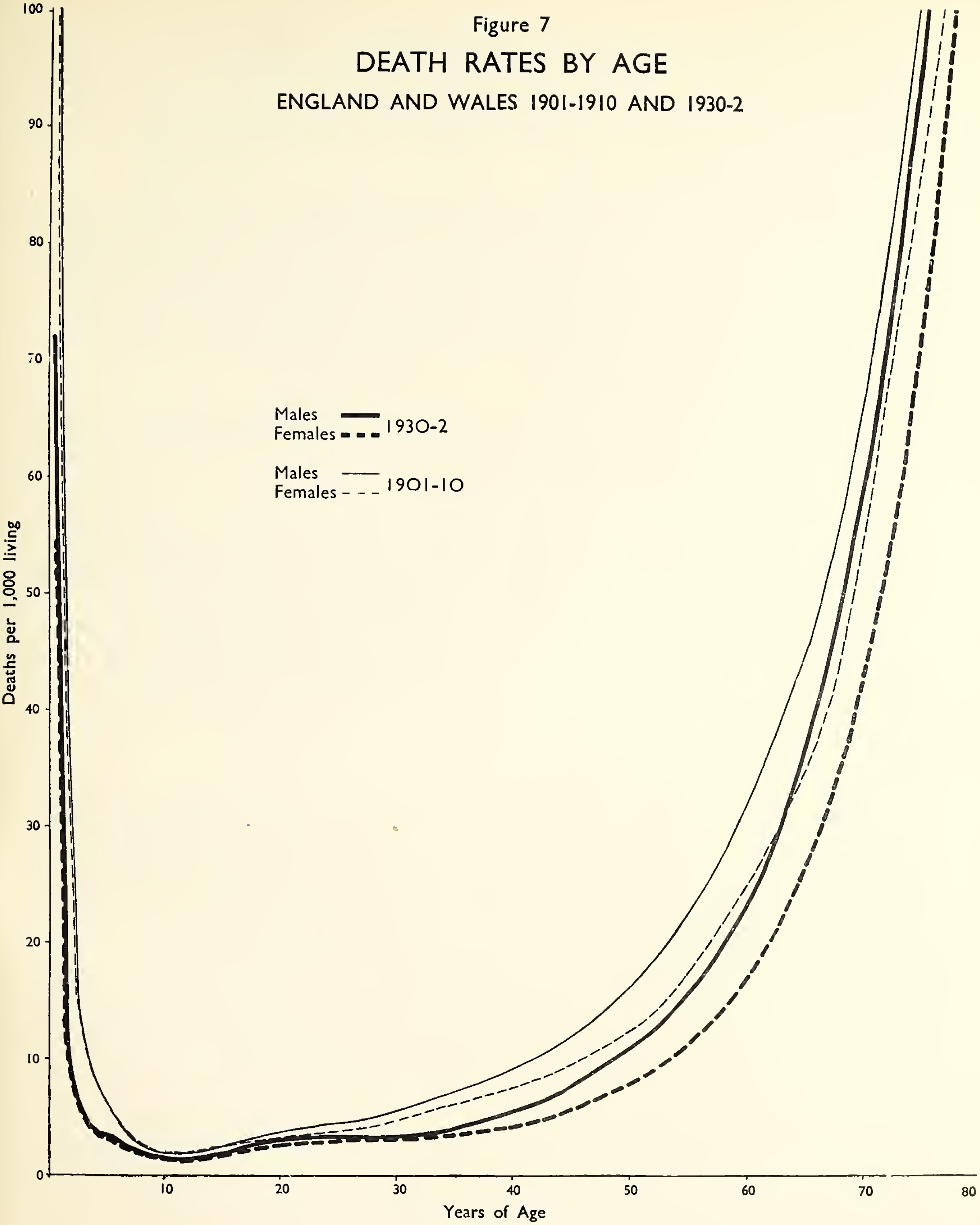


Figure 7

DEATH RATES BY AGE

ENGLAND AND WALES 1901-1910 AND 1930-2

The term "Infant Mortality" has come to be defined as mortality during the first year, and much prominence is given to this rate. But the rate during the first week or month is very rarely quoted. The continued wastage of life at this critical age may perhaps be partly ascribed to public complacency due to lack of information, and even to a misunderstanding of the term "Infant Mortality."

Figure 9 shows the actual mortality rate during the first year of life in 1906-10, 1921-25 and 1935. The horizontal scale is the age in months, and the vertical scale death rate. If the rate during the first day (10.7 per 1,000 in 1935) persisted, only half the infants born would survive more than 64 days. But it will be seen that the rate falls very rapidly, and an infant has gained a fairly good hold on life by the time it is two months old. After that its life becomes steadily safer until it is about ten years old, but the movement is not very conspicuous, whereas during the first month every day makes an appreciable difference.

In 1935 half the total deaths under one year occurred at ages under three weeks, and half those deaths again occurred during the first two days. Figure 9 shows that there has been hardly any improvement at the very early ages.

In Figure 10 the course of the death rate in 1935 during successive stages of the first year of life is traced from all the causes of infant mortality, divided into certain broad groups. The horizontal scale again represents the age in months and the vertical scale the death rate. It will be seen that the causes which particularly affect the newly born are injury at birth, premature birth, congenital debility and malformation and infantile convulsions. Deaths from infectious diseases (including bronchitis and pneumonia), from diarrhœa and all other causes are far more evenly spread over the first year.

Age 0-1 *Month*

In Figure 11 the deaths per 100,000 live births at ages under one month from these groups of causes are compared for 1913 and 1935. The single year 1913 is chosen for comparison because prior to 1911 the classification was not entirely comparable, and both 1911 and 1912 were very abnormal years, which would distort any average which included them, whereas 1913 was in most respects fairly normal. 1935, the latest available year, does not appear to be notably abnormal in any respect. The horizontal scale is deaths in 1913 per 100,000 live births, thus the width of the blocks represents the comparative importance of different causes of death in 1913. The numbers are given in each case. The height of the shaded block shows 1935 as per cent of 1913. The mortality from injury at birth in 1935 was nearly 200 per cent of that in 1913, and thus the height of the shaded block (1935) is nearly twice that of the grey block (1913). This is the only one of these causes from which mortality was higher in 1935 than 1913.

As might be expected, there has been very little improvememt in the largest group, premature births and congenital causes. The heavy fall in infantile convulsions is mainly a question of diagnosis: it is now regarded as a symptom rather than a disease, and it may be due to a variety of disorders.

Figure 8—DEATH RATE AT DIFFERENT AGES IN THE FIRST YEAR OF LIFE

in England and Wales in five year periods since 1906 and annually since 1931, expressed as a percentage of the rates in 1906-10

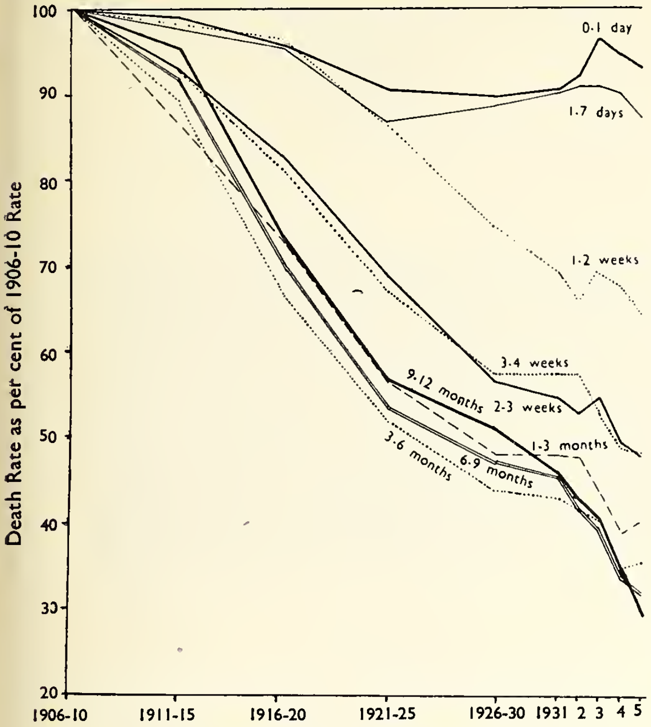


Figure 9—DEATH RATE DURING FIRST YEAR OF LIFE

England and Wales 1906-10, 1921-25 and 1935

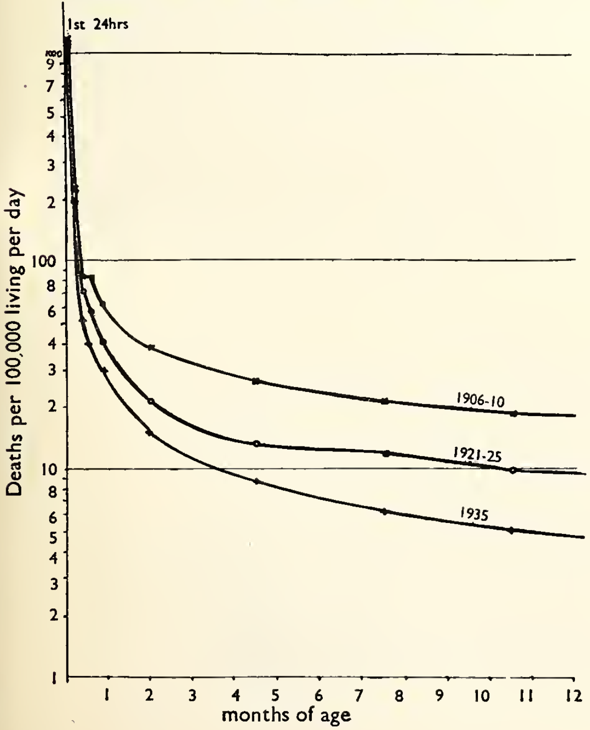


Figure 10—DEATH RATE BY CAUSES DURING THE FIRST YEAR OF LIFE

England and Wales 1935

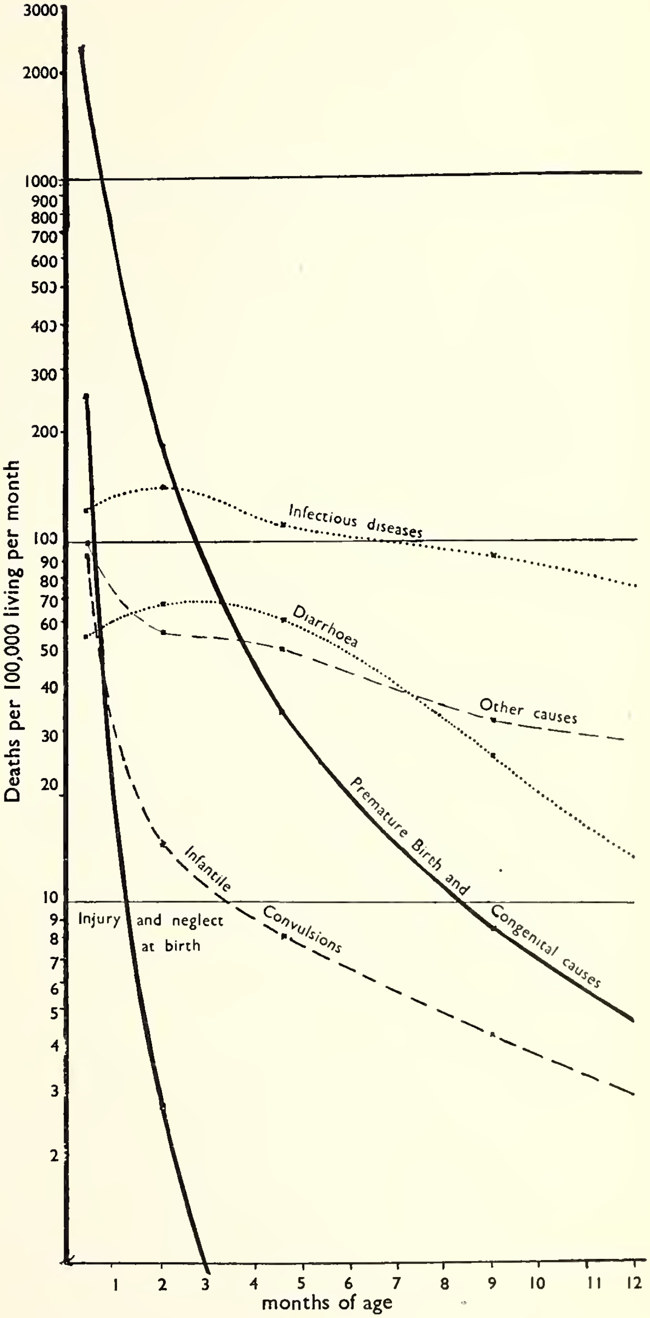


Figure 11—DEATHS OF INFANTS AGED UNDER ONE MONTH

England and Wales 1913 and 1935

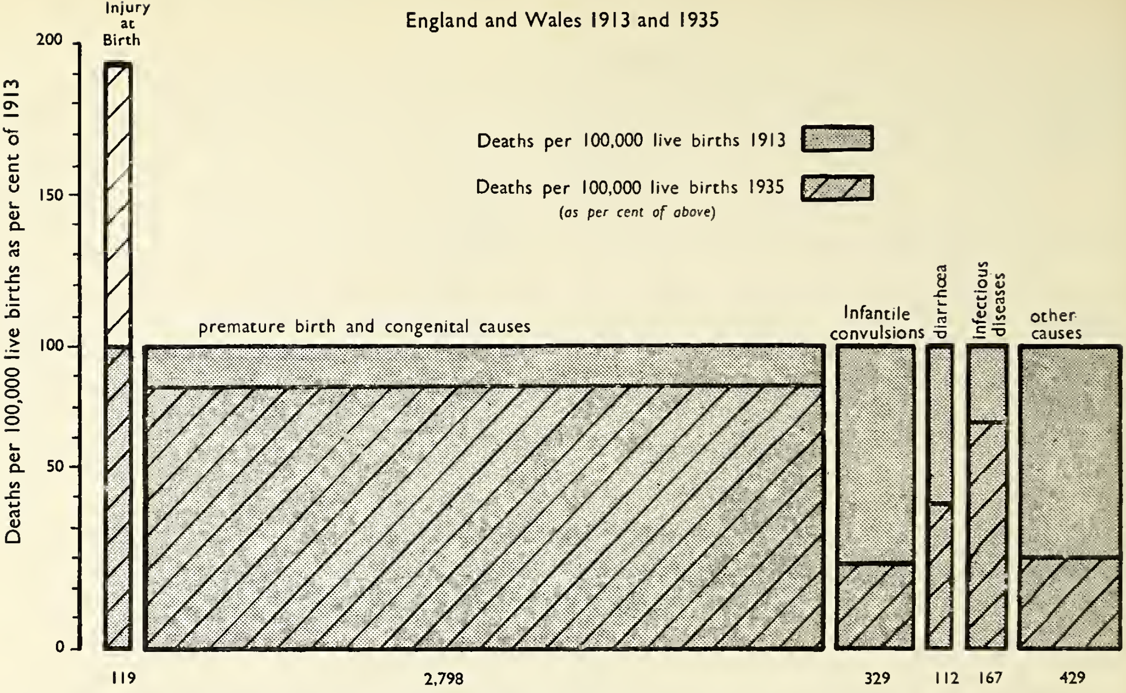
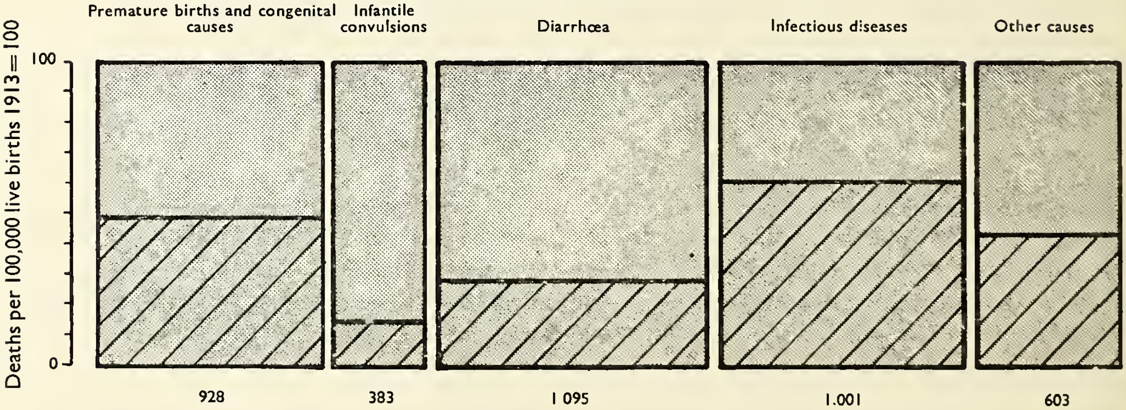


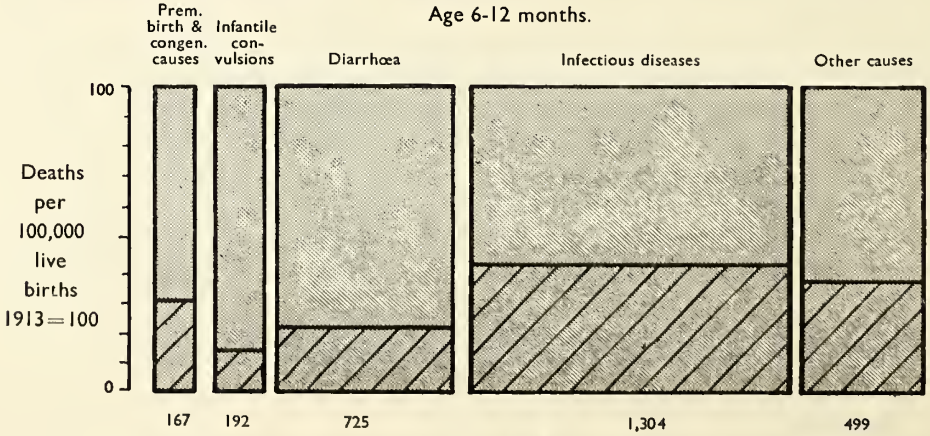
Figure 12—DEATHS OF INFANTS AGED 1—12 MONTHS

Age 1-6 months

England and Wales 1913 and 1935



Age 6-12 months.



More than half the very early deaths are ascribed to premature birth, and the frequency of such deaths has not appreciably diminished. It must be remembered, however, that the actual number of premature births is not known, and thus it is not possible to see the trend of the survival rate of premature infants. The number of miscarriages is also unknown. If they are diminishing, a lack of improvement in the survival rate at a later stage is to be expected. Another factor which may contribute to this lack of improvement is the increasing proportion of first births, but this is partly offset by the decreasing proportion of all births after the third, when the risk begins to increase.

Thus the available statistics do not conclusively prove a lack of improvement in the maintenance of the life of very young babies; but they do show that there is much room for further progress in the field both of ante-natal care, and of research into the causes of neo-natal mortality.

Age 1-12 *Months*

In Figure 12 deaths at ages 1-6 months and 6-12 months are compared for 1913 and 1935. In view of the fact that the greatest improvement has occurred at these ages, it might be expected that the greatest fall in death rate would be in diseases which do not mainly affect the newly-born. But it will be seen that actually the principal group under this head—infectious diseases—has fallen the least of all. It appears that, in fact, a large part of the improvement is due to the tendency for deaths from certain causes to be more and more confined to very early ages.

Children

Age 1-5 *Years*

Children receive less medical supervision at these ages than at any other. They are beyond the scope of the maternity services, and do not come under the School Medical Service unless they attend infant schools or classes. We describe such services as there are for these children in Chapter IV. It appears that much ill-health could be avoided by extending the services for this age group. Nevertheless the fall in mortality rates is remarkable.

Deaths per 1,000 Living

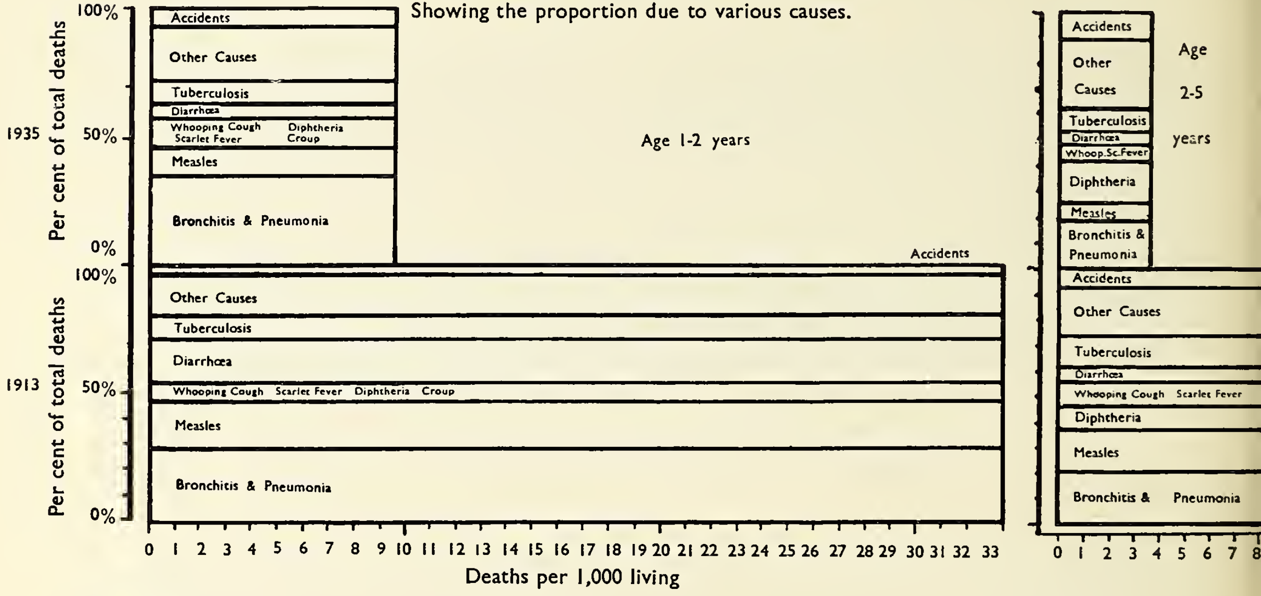
	Boys		Girls		Per cent fall	
Age	1901-10	1930-32	1901-10	1930-32	Boys	Girls
1	40.4	15.3	37.6	13.5	62	64
2	15.9	6.5	15.3	6.0	59	60½
3	10.0	4.4	10.1	4.1	56	59½
4	7.4	3.6	7.5	3.4	52	55

Figure 13 shows the death rates at ages 1-2 and 2-5 in 1913 and 1935, and the relative importance of the principal causes. Measles and pneumonia, and for girls whooping cough, are the most serious dangers in the earlier years, and later diphtheria becomes more serious. The fatality of all these diseases has fallen very markedly. Influenza is the only disease which has grown more virulent, and that does not cause many deaths at these ages. Accidents are becoming a more important factor although the rate has not actually risen.

Figure 13—DEATHS OF CHILDREN AGED 1-5 YEARS

England and Wales 1913 and 1935

Showing the proportion due to various causes.



Age 5-15

There has been comparatively little improvement in the death rates at these ages, but, except in certain areas, there is comparatively little room for improvement. Girls have benefited more than boys, largely owing to the reduction in tuberculosis mortality.

Deaths per 1,000 Living

	1901-10		1930-32		Per cent fall	
Age	Boys	Girls	Boys	Girls	Boys	Girls
5	5.42	5.33	3.43	2.98	37	46
6	3.98	4.12	2.60	2.33	35	43½
7	2.97	3.13	2.18	1.92	26½	39
8	2.33	2.55	1.85	1.62	21	36½
9	1.96	2.14	1.61	1.43	18	33
10	1.82	1.99	1.46	1.34	20	33
11	1.83	1.98	1.39	1.33	24	33
12	1.95	2.07	1.41	1.40	28	32½
13	2.14	2.22	1.51	1.52	29½	31½
14	2.37	2.40	1.70	1.70	28	29

Diphtheria is the largest individual factor in the 5-10 group. Next to this accidents constitute the most serious menace to boys. They account for 16 per cent of the deaths at these ages as against only 4 per cent of all male deaths. In the elder group tuberculosis figures largely, especially amongst girls, although the mortality rate is very much higher at ages 15-25. Heart disease also begins to be a considerable factor, and one which steadily increases with advancing years. Apart from these, no cause stands out very markedly, and over a quarter of all deaths are due to a large variety of illnesses, no one of which accounts for more than 2 per cent of the total.

Deaths at these ages are happily rare, but children suffer from a great variety of disorders, some of which have lasting effects on their future health. Comparatively full information is available about the health of the school child and this will be discussed later in this chapter.

Influenza is the only illness which causes many more deaths now than before the War. The greatest improvements have been in measles, whooping cough, bronchitis and tuberculosis. Deaths from diarrhœa in the earlier years were abnormally high owing to the hot summer of 1911.

Mortality of children from the principal causes just before the War and in 1933-34, and the relation between the rates.

		1911 and 1912			1933 and 1934			1933, 34 rate as per cent of 1911, 12		
		Deaths per 1,000 living at ages:								
		1–2	2–5	5–15	1–2	2–5	5–15	1–2	2–5	5–15
Measles .	. boys	715	177	13	205	49	5	29	28	37
„ .	. girls	652	178	13	188	47	5	29	27	37
Scarlet Fever	. boys	25	34	10	13	14	4	54	42	44
„ „	. girls	25	36	10	14	16	5	56	44	52
Whooping Cough	boys	279	55	3	98	19	1	35	35	37
„ „	girls	374	82	4	125	34	2	33	41	56
Diphtheria	. boys	75	80	25	32	59	27	42	74	109
„ .	. girls	32	78	29	26	55	31	45	71	106
Influenza .	. boys	12	5	2	39	12	3	333	245	193
„ .	. girls	9	4	2	31	10	4	335	281	191
Tuberculosis:										
Respiratory	. boys	71	24	16	14	6	5	19	23	35
„	. girls	53	25	30	10	5	9	19	19	32
Other .	. boys	276	90	35	87	43	15	31	48	44
„ .	. girls	236	88	35	80	39	15	34	43	43
Bronchitis.	. boys	250	35	3	49	7	1	20	20	43
„ .	. girls	253	34	3	46	9	1	18	25	41
Pneumonia	. boys	800	152	21	459	91	16	57	60	77
„	. girls	700	152	20	388	86	14	55	56	70
Diarrhœa .	. boys	557	45	4	78	11	1	14	24	34
„ .	. girls	535	47	5	63	11	2	12	25	38
Accidents .	. boys	78	70	33	63	50	29	81	72	89
„ .	. girls	72	52	16	40	31	14	55	60	88
Other Causes	. boys	617	181	96	233	109	81	38	60	84
„ „	. girls	579	160	96	223	93	77	38	58	80
ALL CAUSES	. boys	3,755	948	261	1,370	470	188	37	50	72
„ „	. girls	3,520	936	263	1,234	436	179	35	47	68

Adults

Death rates at certain ages, and the changes during the last 30 years are shown below. A minus sign in the last columns indicates a rise in the rate.

Deaths per 1,000 Living

	1901-10		1930-32		Per cent fall	
Age	Male	Female	Male	Female	Male	Female
15	2.6	2.6	2.0	1.9	25	26
20	3.8	3.3	3.2	2.7	17	18
25	4.5	3.9	3.3	3.0	27	23
30	5.7	4.8	3.4	3.2	40	34
35	7.3	6.2	4.2	3.6	43	41
40	9.3	7.7	5.6	4.4	40	43
45	12.2	9.7	8.0	5.8	35	40
50	16.6	12.7	11.3	8.2	32	36
55	23.1	18.0	16.1	11.7	30	35
60	32.6	25.4	24.2	17.7	26	30
65	45.6	35.3	37.9	27.6	17	22
70	67.1	56.4	60.4	44.5	10	21
75	100.6	86.4	95.2	74.1	6	14
80	141.6	124.3	145.0	118.6	—3	5
85	203.2	182.0	210.5	179.4	—3	1
90	295.7	257.8	286.1	250.6	3	3

Age 15-60

Figure 14 shows the death rate in 1935 at ages 15-60, broken up into the principal groups of causes—heart disease, cancer, tuberculosis, influenza, bronchitis and pneumonia, accidents, and causes associated with pregnancy. The horizontal scale is the age at death, and the vertical scale deaths per 1,000 living at that age. Each segment represents one of the above groups.

This figure brings out the fact that the principal causes of premature death in early adult life are tuberculosis for both sexes, and accidents for men, while in late middle age cancer dwarfs all others except heart disease. Tuberculosis is the only one of these groups from which the risk actually declines with advancing years. The risk of accidents for men declines from the mid twenties to the mid thirties, but thereafter it rises slightly but continuously, and for women it rises slightly but steadily throughout adult life. The group influenza, bronchitis and pneumonia causes a large amount of sickness, but does not normally prove fatal to persons of sound constitution. Nevertheless it takes its toll at all ages. The risk increases with age about as fast as the risk of death from all causes. It accounts for about a tenth of all deaths between 15 and 60, and a slightly larger proportion between 35 and 50. The death rate from heart disease rises steadily with age, and it accounts for a steadily increasing proportion of all deaths, from about 1 in 15 for men of 20-25 to 1 in 4 for men of 55-60.

The dotted line on Figure 14 shows for the purpose of comparison the death rate from all causes in 1913. Comparing this line with the rate from all causes in 1935, the marked reduction at all ages can be seen. But the comparative lack of improvement in the early twenties is also remarkable. In Figure 15 the death rate by age is given for each of the five principal groups of causes in 1935 and 1913. It will be seen that there has been

Figure 14

DEATHS ACCORDING TO CAUSE AT AGES 15-60

ENGLAND AND WALES 1935

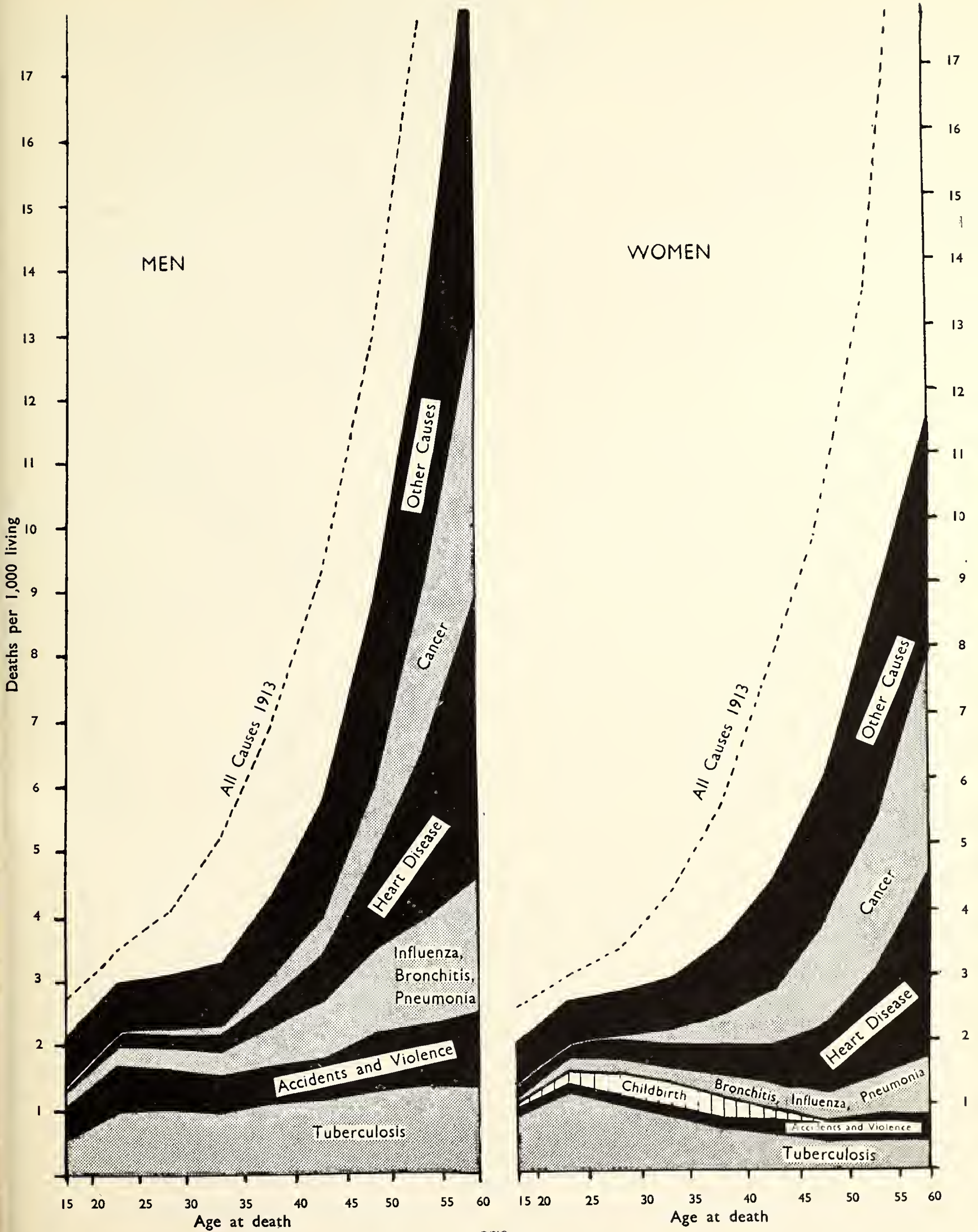
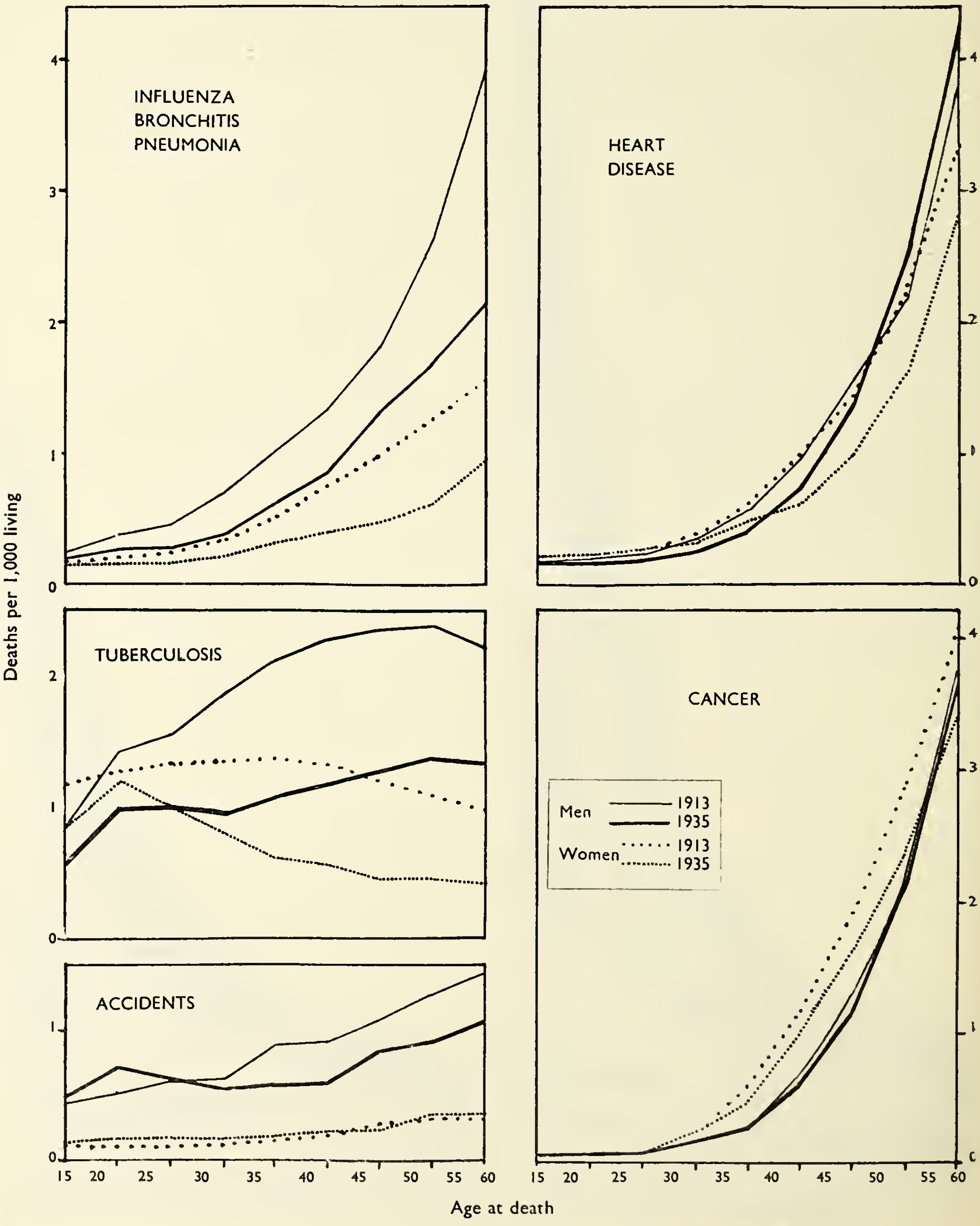


Figure 15

MORTALITY AT AGES 15-60 FROM THE PRINCIPAL CAUSES 1913 AND 1935

England and Wales



no appreciable reduction in the early twenties in the deaths from the two main factors at this age, tuberculosis for women, and accidents for men.

The most striking reductions have been in the tuberculosis deaths after 30, and in the broncho-pneumonia group in late middle age. The latter at least may be taken as strong evidence of an improvement in general health at this period of life.

Age 60-70

One-fifth of all deaths in the sixties are due to cancer, and cancer and heart diseases together account for half of the total. The mortality from both these has changed very little since 1913, but the death rate from all other causes together has been reduced by 40 per cent for men, and for women it has been halved.

It appears that there has been a great improvement in general powers of resistance at these ages, which is partially obscured by the maintenance of the heavy toll of cancer and heart disease. But it is also probable that the recorded deaths due to cancer were unduly low in the earlier years, and those due to other causes correspondingly inflated, since the facilities for diagnosis have improved in the interval. The same thing may be true to some extent of heart diseases.

Aged 70+

A man's expectation of life at 70 is 8½ years, and a woman's 10 years. Many people enjoy unimpaired health and vigour at this age, but with others the general powers of resistance are beginning to be appreciably lowered, and the deaths which occur (except those due to cancer) are mainly amongst the latter class, where, whatever the specific cause of death may be, senescence is an important contributory factor.

The death rates at ages over 60, and the changes during the century are as follows: A minus sign in the last columns denotes a per cent rise.

Deaths per 1,000 Living

	1901-10		1930-32		Per cent fall	
Age	Male	Female	Male	Female	Male	Female
60	32.6	25.4	24.1	17.7	26	30
62	37.5	29.0	28.7	21.1	23½	27
64	42.7	33.1	34.5	25.2	19	24
66	48.8	38.0	41.6	30.2	15	20½
68	56.9	45.7	50.1	36.6	12	20
70	67.1	56.4	60.3	44.5	11½	21
72	79.0	68.4	72.5	54.3	8½	20½
74	92.9	80.2	87.0	66.9	6½	16
76	108.7	93.0	104.0	82.0	4½	12
78	125.0	107.7	123.1	99.0	2	8
80	141.6	124.3	145.0	118.6	—2½	5
82	161.6	143.9	169.3	140.6	—5	2½
84	187.9	168.2	196.1	165.7	—4	1½
86	219.4	196.5	225.4	193.7	—3	1½
88	254.6	226.1	255.2	221.8	—8¼	2
90	295.6	257.8	286.1	250.6	3	3
92	333.8	289.2	320.0	282.5	4	2
94	360.5	317.7	356.7	317.5	4	0

The certified causes of death have changed considerably during the century, but little importance can be attached to these changes because doctors have been continually discouraged from certifying old age, or any of the ailments associated therewith. The only significant development is a marked lowering of the total death rate, especially for women, in the 70's. It appears that early senescence is becoming rarer.

Mortality in Different Parts of England and Wales

There is much evidence to show that the South tends to be healthier than the North, and that the country is healthier than the town.

In the Registrar-General's Decennial Supplement for England and Wales, issued in 1936, a measurement of mortality in different regions has been made by comparing the actual deaths in 1930-2 with those that would be expected if mortality rates were equal to the average for the whole country. Taking the "expected" rate as 100, the actual death rate for all county boroughs is 112 and for all rural districts 86, that is, death rates in county boroughs are 30 per cent above those in rural districts. The greatest contrast is to be found amongst girls of 10 to 14 between the county boroughs of Northumberland and Durham, where the figure is 162 and the rural districts of the East Midlands, where it is 73, a ratio of 2¼ : 1. This difference is greater than the change which occurred over the whole country in this age group between 1890-2 and 1930-2.

Taking all ages from 5 upwards together the figures for different parts of the country may be summarised as follows:

	Males			Total	Females			Total
	C.B.s & London A.C.	Other Urban	Rural		C.B.s & London A.C.	Other Urban	Rural	
North . . .	121	107	90	111	118	114	105	115
South Wales . .	112	111	102	109	112	123	114	118
North Wales . .	—	102	97	99	—	105	111	109
Midlands . .	107	98	87	99	103	101	94	100
London County .	108	—	—	108	97	—	—	97
Rest of South East .	96	88	80	88	91	85	83	86
South West . .	99	90	85	89	96	88	90	90
East . . .	94	87	78	84	98	90	88	91
England and Wales	111	97	86	100	105	98	93	100

The Northern area, which is bounded by the southern boundaries of Cheshire and the West Riding contains about a third of the country's population. The rates are uniformly high throughout the area. The highest figure is in the county boroughs of Lancashire and Cheshire where it is 124 for men and 121 for women.

INCIDENCE OF SICKNESS

Extremely little information is available about the incidence of sickness. Certain infectious diseases have to be reported, but apart from these the only comprehensive material consists of the records of insurance practitioners.

Notifiable Diseases

The incidence of infectious disease gives an indication of the general health of the nation.

	Average 1912-14		Average 1922-24		Average 1932-34	
	New Cases	Deaths per cent of cases	New Cases	Deaths per cent of cases	New Cases	Deaths per cent of cases
Tuberculosis:						
Respiratory	95,982	39	56,656	58	49,506	60
Other	31,267	40	17,779	49	16,068	39
Scarlet Fever	125,136	2	92,801	1	122,133	0.6
Pneumonia (acute)	—	—	52,567	72	57,804	51
Diphtheria	51,464	10	44,658	7	53,120	6
Erysipelas	24,289	4	12,782	5	17,703	7
Typhoid and para-T	8,220	20	3,188	15	1,787	12
Encephalitis Lethargica	—	—	2,170	35	465	174
Smallpox	86	8	2,400	0.7	947	0.4
Dysentery	—	—	524	31	788	14
Puerperal Fever	2,170	—	2,169	—	5,737	—
Ophthalmia Neonatorum	6,166	—	6,655	—	4,424	—
Cerebro-spinal Fever	240	—	347	—	1,611	75
Population	36,623,000	—	38,436,000	—	40,339,000	—

It may be seen from this table that deaths are a very bad index of the incidence of sickness. In this table annual deaths are expressed as a percentage of the number of cases notified in that year, but in some instances the sickness was contracted in an earlier year than the death occurred. This explains the apparent increase in mortality from tuberculosis. The number of cases is continually falling, and deaths always relate to a period when the case rate was higher. This is even more marked with encephalitis lethargica (sleepy sickness) where the deaths actually exceed the number of new cases in 1932-4. The disease became notifiable in Janurary 1919, and the number of cases rose very sharply till in 1924 over 5,000 were notified. In the next ten years the number fell off even faster, to less than one-twelfth (409) in 1934.

Notification is by no means complete. In 1935 9.9 per cent of the deaths from tuberculosis were cases which had not been notified and with illnesses of shorter duration the percentage is probably higher. This factor should be taken into account in making a time comparison, but the tendency is almost certainly towards greater completeness. The number of cases of the majority of illnesses has fallen, and thus the figures may be an understatement of the facts, but they are not otherwise misleading.

Health Insurance Records

Health insurance records, unfortunately, cannot be taken as an index of changes in the nation's health. The amount of sickness and disablement benefit, and the number of cases treated has steadily risen since the scheme started, but other evidence does not suggest that sickness is more prevalent. Such an increase was to be expected in the earlier years of the scheme, since the original participants were all in employment, and therefore contained a very low proportion of the unfit. But this should have worked itself through by now. It seems probable that the service is being more fully used, and is becoming more easily accessible.

At periodic intervals an analysis has been made of a representative sample of cases treated by insurance practitioners, and this should give a fair indication of the relative frequency of different complaints compared with one another. The first analysis was made in the middle of the war (1916) and the first two cover urban areas only. It must be remembered that the insured population is relatively free from chronic invalids, and was even more so in the early days, while on the other hand, the greater use now made of the service implies that it is being used more and more for slight ailments.

	Male and Female	Males				Females			
	Urban	Urban	Urban and Rural			Urban	Urban and Rural		
	1916	1921	1924	1928	1933	1921	1924	1928	1933
Bronchitis, tonsilitis, colds, etc.	181.3	224.4	201.1	213.7	235.1	195.2	181.9	208.5	238.4
Influenza	76.1	90.2	137.3	77.3	126.0	77.5	115.9	60.7	106.9
Pneumonia	69.2	17.8	19.5	15.3	15.9	10.1	12.0	8.8	9.9
Debility, neuralgia headache	56.0	38.5	36.1	36.8	35.1	81.1	77.5	81.3	70.3
Digestive	143.1	125.8	115.9	128.8	116.4	139.6	124.5	121.8	101.8
Septic condition	49.1	74.1	79.3	90.7	76.1	60.7	69.3	74.2	60.3
Lumbago, rheumatism, etc.	66.3	99.0	103.0	107.6	98.0	69.5	74.0	82.1	77.6
Organic heart	22.1	16.0	14.0	12.2	13.3	11.7	12.5	11.3	11.6
Anæmia	39.8	3.3	1.9	2.0	2.2	76.8	59.8	42.4	29.0
Genito-urinary system	28.4	15.3	15.7	17.3	17.3	40.6	45.1	47.9	51.9
Skin	47.1	42.7	33.3	42.0	44.4	49.8	43.6	49.7	55.4
Nerves and senses	67.0	49.0	42.9	59.0	53.8	48.7	50.3	62.2	59.8
Tuberculosis	12.2	14.4	10.9	8.9	7.0	13.1	12.0	9.2	7.5
Cancer	—	2.0	2.1	1.6	2.0	1.5	1.6	1.5	1.4
Injuries and accidents	60.7	106.1	134.8	126.9	106.6	36.4	43.9	51.3	53.2
Others	81.6	81.4	52.2	59.9	50.8	87.7	76.1	87.1	65.0
TOTAL	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0

This table again brings out the prevalence of illnesses which do not figure high amongst the causes of death. One-third of all cases treated come under the first two headings which are, roughly speaking, the common cold and its developments; but these account for less than one-twelfth of the total deaths, and nearly half these deaths are at ages above 70, when senescence must be a contributory cause. Heart disease, on the other hand, accounts for one quarter of all deaths, and only one-eightieth of cases treated.

On the whole the table shows very little change in the relative frequency of different maladies. But tuberculosis has declined very markedly. The number of cases treated by practitioners has declined more than the number of cases notified. This probably means that it is receiving specialised treatment at an earlier stage.

The most striking fall is in anæmia of women. If this is not due to changes in diagnosis it is a very satisfactory indication of improvement in general health and condition.

Diseases of the digestive system have shown a steady decline, which may perhaps be attributed to better diet.

School Children

An annual report is published by the Chief Medical Officer of the Board of Education on the Health of the School Child. But this is mainly an account of the administration of the School Medical Service, and does not give much data which can be taken as a measure of national health.

All children in public elementary schools are inspected on entry, and at the ages of eight and twelve, and the number recommended for treatment for various defects has been recorded in each year from 1925. The numbers for 1925, 1930 and 1935 are shown below. It must be remembered, however, that standards are liable to vary.

Per 10,000 Inspections

	1925	1930	1935
Skin diseases	—	129	95
Defects of vision	876	883	817
Squint	91	90	78
Other eye diseases	95	87	73
Defects of hearing	54	39	28
Otitis medea	63	54	41
Adenoids and tonsils	533	665	422
Other nose and throat	62	63	65
Organic heart disease	22	21	16
T.B.: Pulmonary			
Definite	5	2	1
Suspected	16	8	4
Non-pulmonary	11	9	6
Nervous condition, epilepsy	18	21	19
Deformities	71	96	119

Many local authorities keep fairly full records of the health of school children, but they are not summarised nationally. London, the largest individual area, may be regarded in some respects as representative. Since the war an analysis has been made every November of London children who have been out of school for more than three months, but after 1933 the figures do not include the absentees who are being dealt with in the L.C.C. special children's hospitals. Figure 16 shows for 1920-33 the numbers suffering from various complaints per 100,000 elementary school children. The rise in invalidity

Figure 16—CHRONIC INVALIDS AMONGST LONDON SCHOOL CHILDREN

Number of children each November who have been away from school more than three months suffering from various ailments, per 100,000 elementary school children in London

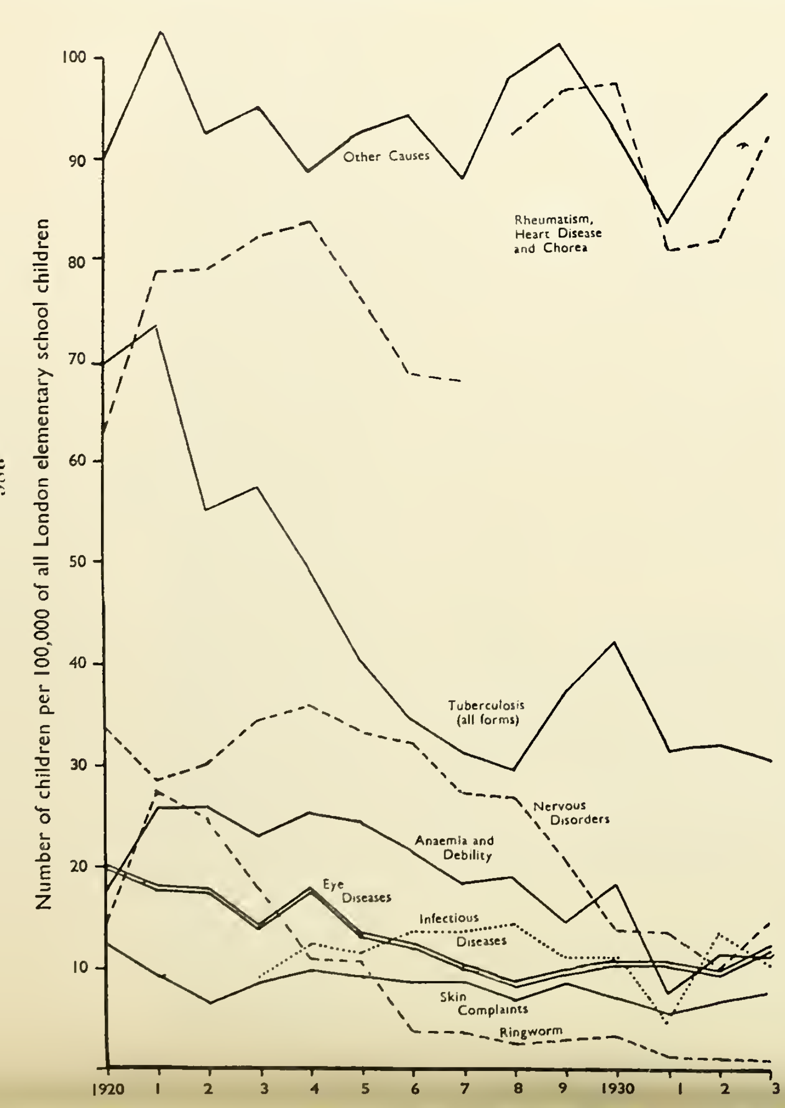
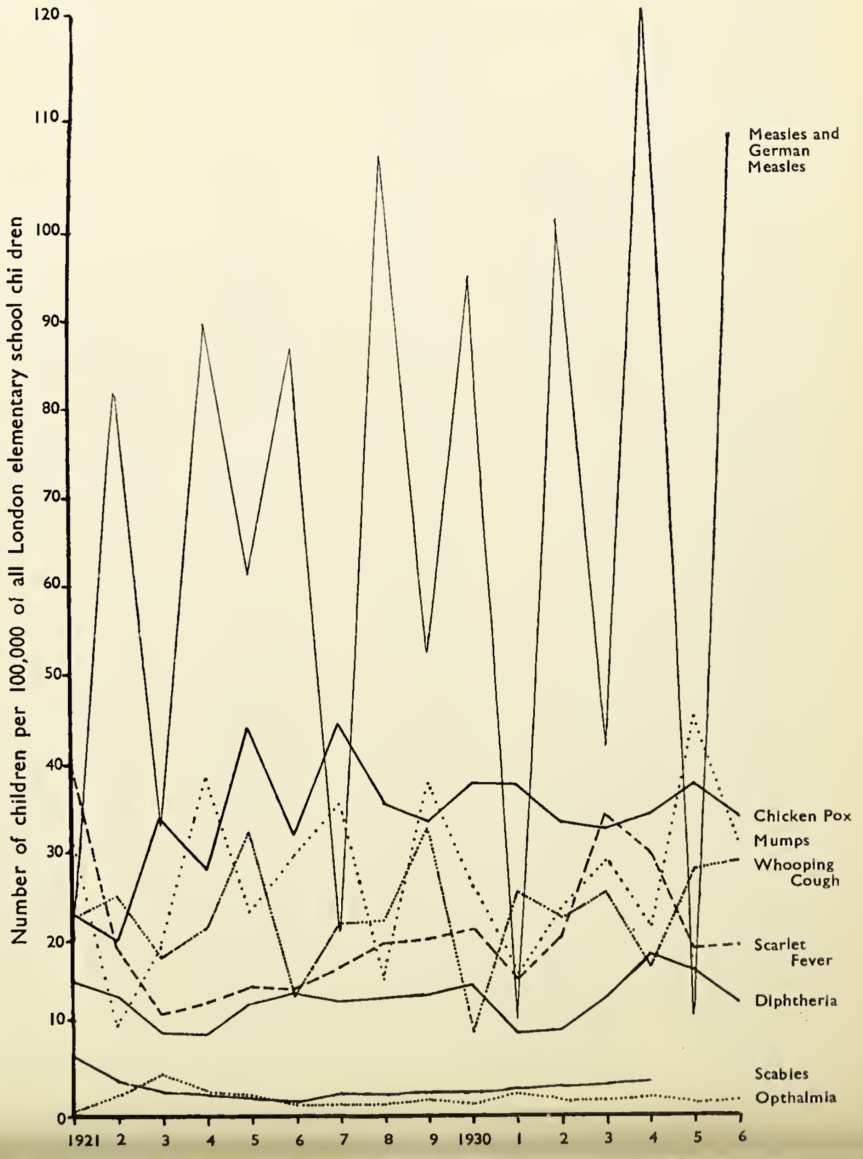


Figure 17—INFECTIOUS DISEASES AMONG LONDON SCHOOLCHILDREN

Number of cases of infectious diseases reported during the year per 100,000 elementary school children in London



from rheumatism in 1928 is due to the fact that from then onwards many children suffering were treated in the units of the Rheumatism Scheme, for periods exceeding three months; while before that date a large proportion of these children, although attending school very irregularly, were not absent for periods of over three months at a time.

There has been a striking fall in anæmia and debility, and in nervous disorders, tuberculosis and ringworm. All these may be regarded as very hopeful signs of general health improvement.

Figure 17 shows the number of cases of infectious diseases reported during the year per 100,000 London school children. The most remarkable feature of this graph is the periodicity, particularly of measles, which appears to have not only a two-year but also a four-year cycle. There is very little evidence of a definite trend, either downwards or upwards in the incidence of any infectious disease.

THE COST OF ILL-HEALTH

Many of the costs of ill-health cannot be measured in money. The subjective element in the endurance of pain and sickness cannot be estimated. It is impossible to say what contribution might in happier circumstances be made to the community by that regrettably large body of persons who "enjoy indifferent health," whose energy is all absorbed in struggling through the daily round.

But the cost of treatment and maintenance of sick persons is susceptible to measurement in money; it would also be possible, if data were available, to put a money value to the work lost through sickness absence from regular employment.

After considering these costs it is appropriate to take stock of expenditure on the prevention of ill-health.

The figures in the following section refer, unless otherwise stated, to Great Britain.

The total number of working weeks lost by persons claiming National Health Insurance sickness benefit was 29 millions in England and Wales in 1933, and in Scotland 2.8 millions in 1936. This excludes most illnesses of less than four days duration, sickness for which benefit was not claimed, and the sickness of persons working on their own account or earning more than £250 a year. Thus it probably represents well under half of the total loss. Yet if the average wage of the persons included in the above figures were £2 a week the money value of the work lost would be over £60 millions a year. At a very moderate estimate the money value of all work lost cannot be less than £100 millions a year. This estimate takes no account of the dislocation in industry caused by sickness absence, but the loss is partly offset where the work of the absentees is done by persons who would otherwise be unemployed.

The cost of treatment and maintenance of sick persons in Great Britain may be summarised under the headings listed below. The method of arriving at the estimate opposite each item is set out in detail in the following paragraphs. In some cases the available material is extremely scanty. However, the figures tend to err on the side of understatement in each case, and thus in spite of a wide margin of error the final total is unlikely to be too high.

	Estimated cost £ millions
Services for the treatment and maintenance of the sick.	
1. Public	39½
2. Voluntary	20
3. National Health Insurance expenditure	36½
4. Other insurances sickness pay	7
5. Expenditure on Workmen's Compensation (disablement cases only)	10
6. Private doctors	38
7. Private dentists and masseurs	9
8. Medicines	25
	185

These figures exclude a number of items for which there is no material to justify an estimate. On the other hand, there is a certain amount of duplication, as, for instance, when part of workmen's compensation cash benefit is spent on medical services.

(1) The cost of various public health services in the latest available year was as follows:

	England & Wales 1934-35 £000	Scotland 1933-34 £000
Hospitals, sanatoria, dispensaries, etc.:		
General	4,971	699
Infectious diseases	3,852	
Tuberculosis	3,827	653
Venereal diseases	440	86
Highlands and Islands Medical Service	—	78
Poor Law Medical Services	7,011	1,150*
Mental hospitals and patients	9,247	1,208
State institutions (1935-36)	153	
Mental deficiency	2,592	
Administrative expenses of the Board of Control (1935-36)	54	12
Welfare of the blind (1935-36)	1,094	116
Pensions to blind persons aged 50-70 (1936-7)	558	76
Medical services of the Navy (1935-36)	406	
Medical services of the Army (1935-36)	1,010	
Medical services of the Air Force (1936 estimates)	368	
	39,661	

(2) The expenditure of the voluntary hospitals which make returns to the Central Bureau of Hospital Information was £15,162,000 in 1935. The hospitals making returns cover 97.7 per cent of the available beds in all hospitals appearing in the Directory. Thus the expenditure of all hospitals appearing in the Directory may be taken as approximately £15½ millions.

---

* Only total Poor Law expenditure is published for Scotland. This figure is obtained by applying to the Scottish total the proportion of medical services to total in England and Wales.

The expenditure by District Nursing Associations (in England and Wales only) has been summarised by the Queen's Institute of District Nursing at £1,019,000 in 1934.

Voluntary bodies provide some homes for chronic and incurable cases. The number of beds in those appearing in the Hospitals Year Book Directory are 3,193. Taking a very conservative estimate of the cost of £100 per bed per year, the upkeep would amount to £320,000.

The total number of beds in convalescent homes has been estimated at 24,000. Their upkeep at £100 per bed per annum would cost £2,400,000. From this must be subtracted the £217,000 paid to convalescent homes by approved societies, which is included elsewhere.

The expenditure of a number of other groups of voluntary bodies was collated so far as it could be ascertained, for the year 1928, by Mr. J. E. Bray, Treasurer of the City of Manchester, and published in his presidential address to the Institute of Municipal Treasurers and Accountants. The items which are not covered by the present estimates were as follows:

	£000
Dispensaries independent of voluntary hospitals .	253
Sanatoria for tuberculosis	219
Institutions for the deaf and dumb . . .	184
Institutions for cripples	133
Institutions for the blind (excluding local authorities' contributions)	895
	1,684

Thus the total expenditure on the voluntary services included in this statement may be taken to be of the order of £20 millions.

(3) National Health Insurance expenditure in Great Britain in 1936 was as follows:

	£000
Cash benefits (excluding maternity) .	17,235
Medical benefits	10,851
Treatment benefits	2,894
Administration	5,699
	36,679

Maternity benefit should not, of course, be included in the cost of ill-health.

(4) Private insurance against sickness is carried out by friendly societies and trade unions. The sickness benefit paid in 1935 is shown below, together with the administrative expenses of this service, estimated at 20 per cent.

	£000
Friendly societies	5,241
Trade unions	571
Estimated administrative expenses of above	1,162
	6,974

(5) The Home Office estimates that the total charge to all industries and employments under the Workmen's Compensation Acts in 1935 was "something under £12 millions." The payments made for fatal cases, in the industries making returns, comprised 13½ per cent of the total payments in 1935. If this ratio is taken as general, and working expenses are allocated in the same proportion, the total expenditure chargeable to disablement cases is something over £10 millions.

(6) The expenditure on private doctors is probably about the largest individual item in the cost of ill-health, but the material for estimating this expenditure is very scanty. The Insurance Acts Committee collected data from 137 "widely distributed" practices with 195 practitioners for the year 1931. The average gross income of doctors in four different types of practice varied from £1,456 to £1,994 per annum. There are 41,729 doctors in Great Britain in the Medical Directory for 1937. It cannot be claimed that the above 195 practitioners are a representative sample of all doctors in the Directory. In the first place, there must be a certain number whose names remain in the Directory for a time after they have ceased to be actively engaged in practice. On the other hand, the above sample is taken from insurance practitioners, and excludes doctors with wealthy middle and upper class practices who do not do insurance work. But the above figures suggest that the average gross income of all doctors whose names appear in the Directory may perhaps be somewhere in the region of £1,200 a year. If this were so the total expenditure on doctors in a year would be £50 millions. From this must be deducted the amount paid by National Health Insurance for medical benefit, and part of the salaries of doctors employed by central and local government, which are included elsewhere. These items total about £12 millions.

(7) There are 14,706 names on the Dental Register for 1937, of whom 8,390 hold academic qualifications. Some indication of a dentist's earnings may be gained from the salaries offered for public appointments. As these appointments have certain advantages such as security, the salaries are likely to be lower than the net earnings of a moderately successful man. A school dentist gets £500 to £700 while a school doctor gets £600 to £1,000 a year. A dentist has fairly heavy expenses, but they are not quite so high as those of a doctor. It would probably not be an over-statement to say that the average gross takings of dentists holding academic qualifications are £750, and of others £500 a year. If this were so the national dentists' bill would be £9,460,000. From this should be deducted the £2,473,000 allocated by approved societies for dental benefit in 1936, which is included elsewhere. This leaves approximately £7 millions.

There are about 11,000 registered members of the Chartered Society of Massage and Medical Gymnastics, of whom about 9,000 are practising, most of them in salaried posts. Their average gross income may be taken as a little over £200 per annum, making the annual cost of massage about £2 millions.

Defective vision, which can be rendered normal by spectacles, is not in itself popularly regarded as ill-health, and thus the cost of oculists and opticians are not included in this reckoning. Some allowance should be made for the time spent and expense incurred by oculists in dealing with eye diseases, but this cannot be estimated.

(8) In the evidence given to the Select Committee on Medicine Stamp Duties, which reported in 1937, it was suggested that the total turnover of the proprietary medicine trade was at least £28 millions. The committee considered that a conservative estimate (for the purpose of calculating the yield of a duty) would be £20 millions. This covers practically all goods "recommended, held out or advertised" as "medicines or medicaments." It does not cover medicines made up to a doctor's prescription by a dispensing chemist. This item must be considerable, though there are no means of estimating it. Thus it appears that £25 millions would be a moderate estimate for the total expenditure on medicine. The Board of Trade returns indicate that the total is probably higher than this. They show that the factory value of "drugs, medicines and medicinal preparations" available for home consumption in 1935 was £12,370,000. This excludes all preparations made in establishments with less than 10 employees, which must account for a fair proportion of the trade. The retail margin on medicines has been estimated at 60 per cent, and the cost of Press advertising, which is not usually borne by the retailer, was £2½ millions in 1936.

A large item in the cost of sickness which has not been included in the foregoing calculation is the amount paid to private nursing homes.

The items in the annual cost of ill-health which have been estimated above may be summarised as follows:

	State and State insurances £millions	Voluntary and private enterprise £millions
Doctors	12	38
Medicines		25
Dentists	2½	7
Other ill-health services	41½	22
Insurance cash payments (including administration)	30	7
	86	99
	185	

This sum represents about one twenty-fifth of the national income.

Preventive Services

No comprehensive figures are available for the preventive services undertaken by private enterprise, under statutes or voluntarily, such as the provision of doctors, nurses and first aid boxes in factories; or by voluntary bodies. But there are a number of State health services of a preventive nature. There are also many environmental services, such as scavenging, which have the protection of health as their primary object. But it is not easy to draw a line between these and services such as water supply and parks, which are primarily a matter of public utility, although they certainly promote good health.

The public expenditure which may be directly debited to the prevention of ill-health in the latest year for which figures are available was as follows:

	England and Wales 1934-35 £000	Scotland 1933-34 £000
School medical and special services (net) 1935-36	5,213	170
Salaries of Medical officers of health, inspectors and health visitors (not allocated) .	1,872	
Vaccination	126	
Notification of disease, disinfection, etc. .	587	646
Port sanitary authorities	101	
Maternity and child welfare	3,221	298
Administration of Ministry of Health, Welsh Board and Department for Scotland (excluding cost of administration of services not directly connected with health) 1935-36	745	69
Medical Research Council (1937-8 vote) .	195	
	13,243	

The various environmental services which largely contribute to public health are as follows:

	England and Wales 1934-35 £000	Scotland 1933-34 £000
Sewers and sewage disposal	11,606	909
House refuse	7,232	—
Street scavenging (1927-28)	4,000	
Baths, wash-houses and bathing places .	2,586	—
Parks, pleasure grounds, etc.	5,733	742
Public conveniences	1,001	—
"Other health services"	1,371	—
Housing and town planning	44,446	5
Municipal Water Supply	20,672	2,273
Cleansing (Scotland)	—	1,201
	103,777	

Conclusion

Subject to all the qualifications mentioned above the results of the foregoing analysis may be summarised as follows:

	£ millions		£ millions
Value of work lost through sickness. At least— . .	100	Public expenditure on prevention of ill-health*	13
Treatment and maintenance of sick persons	185	Public environmental services which largely contribute to good health	104

---

* There are various other items which might be included under this head. The expenditure required for carrying out the provisions of the Physical Training and Recreation Act 1937 is £2.4 millions over 3 years and £170,000 annually.

It seems worth recalling in conclusion that ill-health is to a large extent the result of mistakes which could be avoided, given greater knowledge and care. The main method of securing knowledge is through scientific research, on which the State spends in this field about £200,000 a year, or well under one-tenth of 1 per cent of the annual burden which medical research can demonstrably help to reduce. Other agencies bring total research expenditure up to possibly one-fifth of 1 per cent of the natural expenditure and waste through ill-health. The main methods of disseminating and making effective the knowledge about health are through publications and demonstrations, public relations work and advertising. On these the State expenditure, and expenditure by all public bodies, is equally insignificant.

XVI. THE HEALTH PROBLEM REVIEWED

Reorientation of the Health Services: What is Health ?—Indirect Health Services—The Role of the General Practitioner—Problems of Reorientation—**Voluntary and Public Service:** What Do We Mean By "Voluntary" ?—Defects and Merits of the Voluntary Bodies—Scope of Voluntary Bodies—The Development of Voluntary Services into Public Services—**Co-ordination of Public Services:** The Problem of Areas and of Creating Omnibus Authorities—Regionalism—Internal Organisation of the Administrative System of Local Government—**Personnel Problems—Development:** Tasks of the Health Services—Priorities—**Economics of Health:** Finance of the Health Services—Commercialism and the Consumer—Conclusion.

This Report has now examined, as fully as space permits, the structure and working of the various British health services. In each case an attempt has been made to measure results, to emphasise where success has been achieved, and to point out weaknesses and gaps. The treatment has necessarily been sectional in form, but we have tried throughout to discover the broader principles underlying a structure and a policy for national health as a whole. The object of this final chapter is to try to indicate briefly what these broad underlying principles appear to be.

REORIENTATION OF THE HEALTH SERVICES

What is Health?

Health means more than not being ill. A new attitude is needed, involving not so much a departure from the old as a more thorough grasp of the different elements in health policy. Many people are at any given moment suffering from defects, injuries or sickness so pronounced as to make them unable to carry on ordinary occupations and leisure activities. These are the "cases" with which a large part of the organised health services mainly deal. But in addition there are far larger numbers of people suffering temporarily or permanently from less acute defects, injuries or inadequacies which are not sufficient to unfit them for work or play, and may not even be noticed at all, but nevertheless suffice to place them in an unnecessarily weak position for creating and maintaining good physique, energy, happiness or resistance to disease. Provided that the argument is not pushed too far it is useful to bear in mind a distinction between the mass of socially and economically incapacitating disabilities usually treated as cases of ill-health and the even larger mass of deficiencies and disabilities which do not incapacitate and are often unrecognised or not thought serious. No contemporary health policy can be considered adequate which does not deal with the second group as well as the first.

Until recently medicine was inevitably confined largely to work of a salvage nature. Neither knowledge, nor imagination, nor physical resources were adequate to pass the stage of patching up ill-health and to create boldly and consciously the conditions in which a healthy population could grow and flourish. While efforts at effecting the cure of diseases cannot be relaxed, efforts at prevention of ill-health can and must be increased. The aspect of raising standards of nutrition and of fitness should be given much more prominence. Health must come first: the mere state of not being ill must be recognised as an inacceptable substitute, too often tolerated or even regarded as normal. We must, moreover, face the fact that while immense study has been lavished on disease no one has intensively studied and analysed health, and our ignorance of the subject is still so deep that we can hardly claim scientifically to know what health is. To the extent that health is a positive element mere negative attempts to palliate or even to cure specific diseases cannot be regarded as a solution to the problem.

In the first and most important range of health-creating services come those activities which provide more and better food, housing, recreation, and social and economic security, and which stimulate the knowledge and will to make use of these facilities. The really essential health services of the nation are the making available of ample safe fresh milk to all who need it, the cheapening of other dairy produce, fruit and vegetables, new accommodation to replace slums and relieve overcrowding, green belt schemes, playing fields, youth hostels and physical education, social insurances which relieve the burden of anxiety on the family and advances in employment policy which improve security of tenure or conditions of work and, finally, education in healthy living through training and propaganda. Health problems are frequently the result of social and industrial conditions, and the attempt to deal with these problems piecemeal results in a lopsided development of the health services. It is necessary to remember that there are often two alternative policies for dealing with ill-health— either to treat the cases or to deal with the social and economic conditions producing the cases.

Personal health services, whether preventive or curative, can only deal effectively with limited numbers of persons, and they can hardly be made satisfactory so long as the numerical burden of cases thrown upon them is excessively inflated by wholesale failures in education or in essential social and economic provision. The more careless about health the community is, and the more often its members need serious doctoring, the worse doctoring they are likely to get, because the cases coming up for attention will be too many and at too late a stage.

Indirect Health Services

It is important therefore to outgrow the attitude of confining the term health services to what are really sickness services. The nation needs sickness services, but a nation which regards them as a substitute for health services of the type described above is going to find the confusion expensive in money and in suffering. Such confusion is the easier to fall into because many of the developments most vital to health are considered primarily from other standpoints, and many of the persons who can do most to assist health are not usually regarded, and do not regard themselves, as having special responsibilities in that direction.

For instance, the retailer who brings a more varied and higher grade diet or more suitable clothing and footwear within the reach of masses of the population may well play quantitatively a more important part than the doctor in promoting general health. The research worker is now generally accepted as a first-rate contributor to health improvement, but how many people recognise the apt journalist or public relations officer or film producer who can express essential health principles in simple form and get them adopted in practice, as equally essential health workers? The change over from horse to motor road transport affected health in many different ways—for example, it has increased road accidents but has tended, by removing horse-dung from the streets to reduce fly-borne diseases such as summer diarrhœa. It is a condition of an adequate national health policy that the whole range of national activities which have any important bearing upon health should ultimately be scrutinised and overhauled from this standpoint. Every agency able to help in promoting good health should be examined and enlisted in the appropriate manner in order to ensure that the utmost benefit to health results from its everyday operation. Conversely every agency liable to cause ill-health, through accidents, or promoting unhealthy habits, should be studied and made to feel the gentle but sustained pressure of a community determined to reduce the burden of sickness and accidents. Every newspaper in its advertisements, every employer in his recruiting and labour management policies, and every builder in deciding the sites, designs and layout of housing is exercising a strong and often retrograde influence upon the health of the nation.

Only by carrying the health campaign in this way far beyond the bounds of what are narrowly regarded as health services can they be relieved of congestion, overwork and poverty to a sufficient extent to perform their proper function.

The Role of the General Practitioner

The needs of the individual or family in health matters vary so very much, and call for so much experience and judgment that they can in practice only be intelligently and sympathetically determined by a person inside the health services who is acquainted with the medical record and the environment of the person requiring attention. In other words only the general practitioner can keep track of the resources of the health services on the one hand, and the peculiarities and needs of the individual "consumer" of health services on the other. Almost everyone connected with the health services would, we believe, accept this as a general principle, but almost everyone is in fact, often unconsciously or unwillingly, assisting a drift in exactly the opposite direction. To a large and growing extent the uninformed "consumer" with no equipment for making a sound choice is being permitted, encouraged or even compelled to decide for himself whether he needs to get in touch with any part of the mass of health services we have described, and if so how, and which of them. Owing to the greater movement of population, the decline of large settled families and other social changes there is a growing number of people who have no regular health adviser. How can such persons possibly be expected to find their way satisfactorily to the right points in the bewildering maze of health services charted in the previous chapters?

It is significant to compare in this respect the status of the dentist. Sometimes persons who have removed to another town will travel many miles year after year to be treated by the dentist who "knows their teeth." The dentist sends out regular reminders and is regarded not as a man to be consulted during violent attacks of toothache, but as one whose job it is to prevent any tooth defects from becoming serious. Such an attitude to a doctor is much more unusual.

It is disturbing to find large numbers of general practitioners being taught at great trouble and expense to use modern diagnostic equipment, to know the available resources of medicine, and to exercise judgment as between patient and specialist, only to be launched out into a system which too often will not permit them to do their job properly. If the drift towards a confused mass of conflicting specialisms is to be stemmed, the position of the general practitioner must be so adjusted that he can give the community the benefit of his training and potentialities, and can develop and exercise judgment. Excessive numbers of panel patients and excessive demands for certificates and returns of all kinds quickly reduce the general practitioner to an agent for making out prescriptions (too often for mere palliatives), and for operating something more like a sickness licensing and registration system than a health service. This Report therefore emphasises that a reorientation of the health services is urgently necessary and that this reorientation should take as its pivot the general practitioner, first relieving him of excessive or non-essential work to a sufficient extent to enable him to exercise judgment, and where possible to act as an effective health adviser to the families under his care.

Problems of Reorientation

The implications of such a reorientation are very far-reaching. It implies raising the standard of selection, of training and of equipment of the general practitioner. It implies general efforts to promote healthy living and thus reduce to manageable proportions the number of sick and hurt persons requiring continuous treatment. It implies preferring domiciliary to institutional treatment, wherever conditions are suitable, and checking the uncontrolled spread of badly co-ordinated specialist agencies. On the other hand, it implies a tidying up of the health services to ensure that a suitable range of facilities is available to all persons and in all districts, so that the general practitioner may readily pass on for appropriate specialist treatment those who require it with a minimum of geographical, administrative or financial impediments. In administration, it implies arranging for the economic and efficient availability of health services whether they are on a voluntary or a public basis, and regardless so far as possible of considerations which have nothing to do with health, such as local government boundaries. Finally, it implies that the finances of the health services must be such that a person should not be deprived of necessary treatment or treated in a more inconvenient or less suitable manner, owing to the collection of the necessary revenue proceeding through arbitrarily separated organisations, or owing to complex and anomalous rules about benefit.

We have shown that in health, unlike most other services, co-ordination must, if it is to be effective, be brought very close to the consumer. The general practitioner, with his knowledge of the person under treatment on the one hand, and of the resources of the health services on the other, has to perform the key function of co-ordination. But he cannot do this unless the health services are so organised as to enable him readily to know what facilities exist, and to make use of them as occasion demands. The many new health services which have grown up in the past fifty years have created a new class of public medical officers over against the general practitioner, and the two groups are often out of touch with one another and should be brought together.

Unfortunately, the general co-ordination of the health services is still fragmentary. We have, it is true, a Ministry of Health, but this is not concerned with the whole of Great Britain, nor does it deal with many vital aspects such as the facilities in factories, health in schools and medical research which come under different government departments, nor with such great unofficial services as voluntary hospitals and insurances, and the whole range of services provided by the medical and ancillary professions. While the creation of a central health headquarters is no doubt neither practicable nor desirable, this Report shows several examples of the attainment of co-ordination by simple and successful devices which might well be applied elsewhere. For instance, the Ministry of Health and the Board of Education secure smooth relations between the school medical service and other health services by having a single chief medical officer. A similar practice is followed by the City of Aberdeen and the county councils of Aberdeenshire and Kincardineshire, which have created an effective regional medical service linked together by the common choice of a medical officer of health, with a suitable number of deputies. In Gloucestershire local government and voluntary services have been brought into one scheme with the local general practitioners. In the Scottish Highlands and Islands there is a regional medical service covering about a fifth of the area of Great Britain, although the population affected is comparatively small.

It is doubtful whether many of those charged with the responsibility for local medical services have sufficiently considered whether such arrangements, or variants of them, might not be applied with advantage in their own areas. The Medical Research Council have been successful in securing co-ordination in research, where it is perhaps most difficult. It is often overlooked that there is need for research and experiment not only on the nature of diseases and their cure, but on the nature of health problems which may involve a complex of social and economic considerations and on the methods of dealing with them. It is no less necessary for those concerned with national health to examine the diseases of insurance schemes and of the general practitioner system than it is to study heart disease and cancer. The production and distribution of ill-health in unhygienic and unsuitable factories and offices, and in overcrowded vehicles, await more attention from socially-minded doctors and from public bodies.

VOLUNTARY AND PUBLIC SERVICE

One of the most crucial problems of co-ordination which remains to be solved is the relationship between voluntary health services on the one hand, and State and local authority services on the other. The problem has been discussed more generally in our Social Services Report, and is not peculiar to the health services, although it arises here in a particularly acute form. Many generalisations have been attempted regarding the proper spheres of voluntary and State provision, but not all of these appear tenable. Our view is that it is very much a matter of the prevailing political and social economic background and that features such as freedom of experiment which appear to be peculiar to, or superior in voluntaryism in one phase, may well be matched in public service in another phase, given a favourable background of opinion.

The point is only relevant as a warning against any cut and dried view of the respective provinces of the two systems in the long run, because obviously for as far ahead as can be seen the two must continue to work side by side in Great Britain. At its best, voluntaryism is a very fine thing, but it would be disingenuous to deny that some peculiar and unsatisfactory developments of the principle are to be found among the contemporary British health services.

What Do We Mean By "Voluntary"?

There is, in fact, much confusion and ambiguity in the use of the term voluntary, which appears in several senses indiscriminately. A vast hospital with hundreds of persons on its pay-roll, and a birth control clinic entirely dependent on unpaid help are both "voluntary." A statutory approved society embracing hundreds of thousands of members, entirely controlled by a profit-making limited company, itself on paper responsible to several thousand shareholders who never meet, is also a "voluntary" association. To a large extent the term seems to be applied to all unofficial organisations, but the growing tendency to confer semi-official status upon independent bodies by devolving upon them public duties and by supporting them out of public funds makes this distinction more and more unreal. Even the test whether the governing body is elected by some unofficial constituency or is appointed by central or local government authorities becomes harder to apply as more and more hybrid forms emerge. While variety is no doubt evidence of vitality the development may lead to confusion and undermine responsibility if it is not watched and guided. It seems often to be taken for granted that what are held to be the merits of past examples of voluntaryism can be reproduced by creating new bodies which are called voluntary but are in many essential respects totally different from the supposed precedents. Some of these, for example, instead of being thrust up from below by the spontaneous enthusiasm of a group are created by official initiative from above, sometimes with little or no independent financial support, in order to fill a gap which government does not find it expedient to occupy. Some, again, are for all practical purposes controlled by salaried officers doing a more or less routine job with no effective supervision. Whatever the value of such types may be it is important to understand that they are new types, with problems and characteristics of their own. If we exclude services operated by central and local government, and by persons or undertakings working independently for profit or reward, the remaining mass of what are usually called voluntary services may be divided by a financial test into three distinct categories:

(*a*) Those wholly or largely financed by subscriptions and donations of persons other than the beneficiaries—the traditional "charity" model.

(*b*) Those wholly or largely financed by payments of the beneficiaries, notably extra insurances, such as hospital contributory schemes.

(*c*) Those mainly or substantially subsidised out of public funds.

The control of these types shows marked differences. Voluntary bodies of category (*a*) are typically responsible, in theory, to a general meeting of subscribers of certain amounts who, in practice, rarely have any real control either over elections or policy. Those in category (*b*) are, in practice, service organisations for limited purposes and, in some cases, it is not apparent that much interest is taken in their affairs, or much control exercised by any except the paid officials. Those in (*c*) are liable to be, in fact, although usually not openly, under the control of the central or local government authorities concerned, to the extent of their financial dependence. Partly as a result of government policy this class has lately grown both through fresh creations and through the gradual transfer to it of bodies formerly in (*a*). The increase of size of many of the organisations, the growing diversity of structure and of financial arrangements, and the rise of the salaried "civil service" or bureaucracy of voluntaryism, have in many cases made it difficult to say where the responsibility for the conduct of affairs lies, although it is often easier to ascertain who in practice exercises it.

The term "voluntary," however, is often used in quite a distinct sense, connected not with the independence from public control of a governing body or the source of funds, but with the nature of the work done. In this sense any unpaid service is voluntary, and as unpaid effort is used substantially by local authorities, in connection with after-care, for example, there is to that extent a voluntary element in public health services.

It seems futile to attempt here to break away from the current tendency to use "voluntary" as a convenient label for all unofficial non-profit making services, but we hope this short analysis will bring out the need for care. The essence of voluntaryism appears to us to consist in rendering service free of any financial interest. In some "voluntary" branches of the health services to-day this principle seems to have been overlooked.

Defects and Merits of the Voluntary Bodies

All voluntary organisations, including the voluntary hospitals, the hospitals contributory schemes and other provident insurance schemes, labour under a number of disabilities. They all have to devote a large proportion of their energies to raising funds and advertising their successes. As a corollary they have to gloss over their failures. Sometimes it is even impossible to "clean up" the inefficient and more discreditable parts of voluntary organisations, since the publicity entailed would cause subscriptions to fall off. Competition between them for the favours of the public is intense. Incidentally, this seeking after publicity may be prejudicial to those employed in public institutions such as the local authority hospitals. There are, moreover, still considerable opportunities for the unscrupulous to exploit the charitable under pretence of assisting the voluntary organisations.

Voluntary bodies are often inadequately equipped and staffed by an underpaid and untrained staff. Most of the voluntary hospitals, of course, are not open to this criticism, but other organisations, where they still have to rely either on whole-time workers who have not been properly trained or selected, or on indifferent voluntary service, are far worse off. In some particular services, as will be shown, the haphazard method of recruiting may be an advantage. Also the organisation may be able to utilise voluntary work of a part-time or casual nature which could not otherwise be tapped.

A new personnel problem has been raised by the recent growth of salaried staffs of relatively small independent voluntary bodies. Many such bodies cannot provide suitable ladders of promotion for all their officers, and the absence of contact, and of such mechanisms as joint superannuation schemes, makes the career relatively unattractive against the growing competition of better organised professions and occupations. Some joint action for improving conditions is badly needed.

The "personal touch" is often regarded as a chief asset of voluntary bodies, but there is no reason to suppose that the servants of a public body always lack this touch, nor that those of a voluntary body always possess it. Improved and modified methods of recruitment to the public services might well attract to them a different type of personality. Nor is bureaucratic harshness confined to public bodies. Voluntary bodies are often dependent on the personality and vigour of one or two persons, and if public bodies took them over it is thought that the qualities imparted to them by this fact would atrophy. These bodies also often afford scope for men and women with qualities different from those found among the staffs of public services. This is partly due to the fact that the system of recruitment for the public services is generally by examination at a comparatively early age. Voluntary services also afford opportunities for elasticity in administration.

A danger of voluntary organisation is that it battens on the generosity of the few and can, from one point of view, be regarded as "a bounty to the selfish and heedless."* It may also do injustice between the rich and poor parts of the country for in the health services charity often begins at home where, in many cases, it is least needed.

On the other hand, where there is a genuine spirit of voluntaryism conditions of work relatively worse than those which could be justified in public service are cheerfully accepted. The easier coming and going in voluntary health services make it possible to give scope to certain valuable types of person not easily accommodated in official ranks, and to try out new ideas with less hindrance. The worst voluntary bodies may sink to a level which would not be tolerated by any public authority, but the best set a remarkably high standard. Unquestionably, many of the greatest achievements of the British health services up to the present time have been due to voluntary initiative.

Scope of Voluntary Bodies

The scope for work by voluntary bodies in the health services appears to fall into five classes. (*a*) work in which freedom of opinion in teaching or research is absolutely vital; (*b*) work which is of a controversial nature; (*c*) work which is of a pioneering character and contains an element of risk; (*d*) other "charitable" work which no public body thinks part of its duty although its value is generally recognised; (*e*) work where the disease or health problems involved affect the social life of the individual and there is scope for personal influence or example.

The justification for voluntary bodies carrying out research and teaching is solely that freedom is vital for work of this kind. Even if voluntary funds were not forthcoming machinery would have to be devised to secure this freedom. Nor is it impossible to envisage its creation since it is already partly in existence. For example, the University Grants Committee do not interfere with university administration although they are responsible for the allocation of State funds for higher education. The Post Graduate Medical School at Hammersmith does not appear unduly hampered by its dependence on the State. The freedom of the Medical Schools must be preserved, but it is necessary to point out that pressure from wealthy philanthropists is equally undesirable and a searching after patrons is both demoralising and undignified.

Work which is of a pioneering or a very controversial nature such as the creation of birth control clinics, must often be left to voluntary bodies, for a mass electorate will sometimes not sanction the expenditure of public money on work of this kind. A public body could justifiably refuse to spend the taxpayer's money on experiments such as the creation of child guidance clinics and nursery schools until their worth was proved. At the same time a voluntary body can rightly take upon itself the duty of educating the public by propaganda and example in their use. But this is not necessarily work that by its nature belongs to voluntary bodies. Admirable pioneering work has been done, for example by British local authorities in the creation of fever hospitals. Decentralisation of the health services affords opportunities for experiment to local authorities even in controversial matters. Often when public bodies consider it necessary to take over a service they find that a vested interest has grown up and difficulties in creating a uniform and co-ordinated service are encountered.

---

* cf. T. S. Simey—*Principles of Social Administration*, Oxford 1937.

A very strong modern justification for voluntary services has been the opinion that personal contact with individuals can be attained more easily through them. Voluntary bodies are therefore often left to do services entailing this quality such as after-care work for mental defectives, and social work in connection with the school medical service and mental hospitals. They are to be made almost entirely responsible for physical education, State control of which might in present conditions raise some of the same problems as military conscription.

The Development of Voluntary Services into Public Services

If the educational work of a voluntary body convinces the public that a comprehensive health service is necessary then the voluntary service will often be converted into a public service. This process of education may be accompanied by a changing public attitude, turning entirely from the work of the voluntary body to the service rendered. Thus it came gradually to be realised that it was in the community's interest to look after a partially blind person in order to prevent his becoming a complete charge on the community.

The process of creating a more comprehensive service may take the form of the public body partly financing the work of voluntary bodies. This is occurring in the case of child guidance clinics and organisations devoted to physical education. The voluntary organisation can then act as a buffer between the public and the public body and bear part of the responsibility if the failure of its experiments ensues. It is impossible to say what are to be the future spheres of the voluntary and the public services, both of which are now so rapidly expanding. We can, however, say quite definitely that both are likely to be necessary for as far ahead as it is profitable to look, and that both therefore must be made more efficient in discharging their respective functions and in co-operating with one another.

CO-ORDINATION OF PUBLIC SERVICES

Quite apart, however, from the underlying issue of the division between voluntary and public services there are very large questions of structure and co-ordination which principally affect the public services themselves. Many of these are not peculiar to health services, but are shared by other branches of central and local government. Some of them are being investigated by other PEP groups from other standpoints and they can only be tentatively dealt with here.

The central departments of government are not, except in relation to National Health Insurance and to factories, directly concerned with the administration of the health services. National Health Insurance was the first great health service constructed on a national scale. But some portion of its administration was left in the hands of local bodies, the insurance committees. The Friendly Societies were also utilised. Practically all the remaining public health work is left to local authorities. It is sometimes very diverse in quality. One authority may have a good maternity and child welfare service, another a good school medical service, and both a bad tuberculosis service. A citizen's health may, in fact, depend on which side of a local government boundary he happens to live at a particular age. Not only may this lack of uniformity affect the inhabitants of a local government area but an inefficient service may also endanger the health of inhabitants of other local authorities' areas. There is, as we have shown, machinery for securing some kind of uniformity, but a great deal remains open to the initiative of the local authorities and their officers. Both local authorities and their officers have enthusiasm and consequently much valuable experimental work is done, sometimes at the expense of the efficiency of other services. To some extent it is inevitable if the system is entrusted to small local democracies that there should be conspicuous abuses and inefficiencies in some places. Some local authorities are hampered by the low rateable value of their areas and are unable, despite the provision in the block grant formula for such a contingency, to raise sufficient funds to provide adequate services. In order to secure at least minimum services of a higher standard than exist in some areas to-day, the central government should be prepared to assist backward areas even further, if they can show that their need is due to a low rateable value and heavy expenditure on the social services resulting from peculiar conditions. The importance of raising minimum standards is increased by the misfortune that many of the areas most handicapped by poverty are those where the largest proportions of future citizens are now growing up.

The Problem of Areas and of Creating Omnibus Authorities

The problem of the diversity of the quality of the health services over a comparatively small areas raises the question as to what is the best unit for their administration. Local administration and finance preserve elasticity and maintain local public interest. The recent history of local government reforms has been the elimination of smaller authorities and of *ad hoc* bodies set up to administer particular services and the creation of large "omnibus" authorities or joint authorities. But we have shown in many places in this report that this has not gone far enough for full administrative efficiency. Thus we have advocated that the functions of insurance committees should be taken over by county councils and county borough councils, and by the corresponding authorities in Scotland. It is argued that the small local authorities, like some of the voluntary bodies, mobilise much valuable public service and attract as members men and women who have not sufficient time to serve on the large bodies. Many of the smaller authorities undoubtedly do excellent work. On the other hand the recent multiplication of both public and voluntary bodies has created a demand for committee members which cannot be satisfactorily met. Either the same overworked people reappear like a stage army in several different capacities, or resort has to be had to unsuitable candidates. The forthcoming issue of the L.C.C.'s 'London Statistics' shows that there are now in London administrative county no less than 17,000 different places to be filled on local government committees and other bodies. The number of separate individuals filling these places is estimated at 10,000 giving an *average* of nearly two 'places' each. There is something wrong with a system which leads to the creation of more committees and authorities than can be adequately manned, and which loads on to cumbersome representative bodies administrative functions which can only be efficiently discharged by whole-time officers under suitable control. In many places outside London where the permanent staff is inevitably less strong the trouble is even more acute. Attention should be directed not only to the pathology of the human body, but to the pathology of the body politic, and health administration seems especially susceptible to the ravages of cancerous growths needing drastic surgical treatment.

In many places in the report, particularly in relation to water supplies and sewerage systems, we have called attention to the need for larger areas of administration. While in these two particular respects Scotland is worse off than England and Wales, in Scotland the county councils and the councils of the larger burghs are the only authorities for the administration of all the health services, such as the maternity and child welfare services as distinct from the environmental services. The Scottish school medical service is in the hands of the county councils and the councils of the four cities. Admittedly the population in the administrative areas of the larger burghs is sometimes very small, ranging as low in some cases as 20,000. In England and Wales, however, environmental and some other health services are sometimes still administered by municipal borough councils, urban district councils and rural district councils, as Appendix I shows.

The model unit in England and Wales of public health administration, in function if not in size, is the county borough council, since it is all-powerful within its sphere and completely autonomous. County councils could, if they took over the direction of the services relating to infectious diseases, maternity and child welfare and the school medical services, be made into similar authorities. Local committees to watch over, stimulate and criticise the administration of these services could still be preserved. Many municipal boroughs and urban districts are too small to be left with the administration of these services. Even some of the county councils, including a number in Wales, administer areas which are really too small to be suitable units of public health administration.

Regionalism

It is, however, not merely a question of extent of area and size of population. Many of the local government areas, even the largest, are not suitable for the administration of the health services. The provision of water supplies would often be better related to areas planned according to the catchment areas of the neighbourhood. Many of the institutional services would be more efficiently run if they were not arbitrarily broken up by boundaries cutting across the natural social and economic groupings of the region. In the case of mental hospitals and homes and colonies for mental defectives this need has been partly recognised by the devolution of their powers on joint committees and boards by the responsible local authorities.

The King Edward VII Welsh National Memorial Association administers a regional tuberculosis scheme for all Wales. We have already discussed the problem of regionalism in relation to hospitals in some detail, but it is well to remember that not only is there a problem of combining in regional areas the public and voluntary hospitals but also of planning the public hospitals on a regional basis. Sometimes this is hampered by the failure of a county council, for example, to come to an agreement to use the hospital of a county borough council in the town obviously most suited for a hospital centre for the area.

The Majority Report of the Royal Commission on Local Government in the Tyneside Area (Cmd. 5402, H.M.S.O. 1937) said:

> "We have given careful thought to the question of the fusion of environmental and medical and allied services in one system and under one authority, but in view of the number, variety and nature of the services concerned we arrived at the conclusion that, from a practical standpoint, the environmental services can be administered with greater advantage by local units, and that the most efficient and economical way to administer the medical and allied services, including hospitals, is by a single regional authority covering a wide area."

This Commission were particularly impressed with "the inordinate disparity in the provision of public medical services as they exist to-day." They considered that only by limiting the number of local authorities could hospital services be properly planned in Northumberland and Durham. They wished also to eliminate the multiplicity of institutions which hamper the development of up-to-date treatment centres for infectious diseases and they wished to establish uniform standards of staffing in public health institutions. They concluded their argument with a quotation from the evidence submitted to them:

> "We have already stated our conception of the benefits accruing from a unified health service—the curtailment of redundant clinics and overlapping services, the pooling of hospital and institutional accommodation, the resilience in times of stress, which will obtain through the fluidity of staff and hospital beds, the establishment of definite standards in the provision of service, and the economic returns which should characterise large-scale organisations."

Whatever may be thought of the particular schemes recommended by the Commission, the widespread discussion arising out of their Report has shown that the problem is recognised as an important one, and is far from being restricted to Tyneside.

The machinery for joint boards and committees is often adequate to secure co-ordination on regional lines. This should be facilitated if public health services are increasingly taken over by county councils since there will then be fewer authorities to agree or disagree. But it is apparent that this reform, in some areas at least, will not be sufficient and larger regional bodies may have to be created.

Internal Organisation of the Administrative System of Local Government

There is a certain lack of co-ordination of public health services even within authorities such as county borough councils providing all the services. Arrangements vary widely. Thus the school medical service may be administered by the Education

Committee; the mental hospitals and mental deficiency services by special statutory committees; the service of district medical officers and the unappropriated poor law hospitals by the Public Assistance Committee; the maternity and child welfare services by a Maternity and Child Welfare Committee which may or may not be a committee set up for other purposes; the other health and many of the environmental services by the Public Health Committee or separate standing committees for each particular aspect of public health. Administrative co-ordination is secured only through the Medical Officer of Health, and in some large county boroughs there may be a separate School Medical Officer, although this is discountenanced by the Ministry of Health. Administration of these services is further complicated because it takes place under a number of different legislative codes. Sometimes various measures of co-ordination are secured. Thus in Coventry and Dewsbury all the members of the Public Assistance Committee are on the Public Health Committee. In Hull the Health and Public Assistance Committee is combined. In Burnley the Public Health Acts and Maternity and Child Welfare Act are administered by a sub-committee of the Public Assistance Committee. Obviously in this sphere there is considerable need for the co-ordination of local government machinery in order to secure an adequate appreciation of the role of the health services and their proper utilisation. The internal administration of authorities with more limited powers is even more haphazard than that of county borough councils. There appears to be a need for more conscious experimenting and testing in order to ascertain the best type of organisation. It is very doubtful whether present arrangements are the best. For instance, the allocation in some cases of assistant medical officers and of health nurses to a single specialised branch handicaps co-operation and limits experience. In the case of nurses it also adds needlessly to the amount of visiting to homes.

PERSONNEL PROBLEMS

Serious problems of personnel arise in connection with the health services. Even the minimum general training of a medical practitioner is inevitably long and costly, and in addition to it modern conditions demand an increasing range of specialised knowledge only to be acquired through expenditure of further time and money. Quite apart from any qualitative considerations and from financial obstacles it is evident that the existing numbers of general practitioners, and also of specialised workers such as oculists and dentists, are not sufficient to give all families anything approaching the standard of attention customary in the middle classes at the present time. It is often suggested that the medical profession is overcrowded, but in terms of human needs it is on the contrary seriously under-staffed. The trained medical man with his skill and judgment has cost the community a lot to produce, and his abilities should, therefore, be developed and used to best advantage. Unfortunately, there are many obstacles to this.

Finance is one obvious distorting influence, making it difficult for some who would be assets to the profession to secure entry, and handicapping some doctors as against others of less skill. Numbers of young men and women temperamentally more suited to the profession of medicine and conditioned by the circumstances of their upbringing to understand the problems of ordinary people are debarred from or defeated in the attempt to qualify, simply because their parents cannot afford the large capital outlay involved. This, at any rate, is true of England; in Scotland medicine offers much more definitely a career open to talent from all classes. It is, however, partly financial stringency which leads so many Scottish graduates into salaried posts instead of into general practice.

Once entered, the medical profession offers a high average income in Great Britain compared with that earned either by the Continental doctor or by members of most other British professions, except the law. While there are pitfalls in attempting to find and compare net earnings the salaries which have to be paid to attract medical men of suitable calibre to central and local government service are fairly convincing evidence, and some sample statistics obtained through direct inquiry by the British Medical Association are given on page 145.

We are, moreover, far from having found the ideal method of equipping for medicine students with different gifts and backgrounds who are proceeding towards very different and largely unpredictable tasks in their professional careers. The existing mechanism is imperfect not only for selecting, out of each generation those who would do best in the health services, and giving them the best possible training for their work, but also in making the best use of the available personnel as they are.

The almost complete divorce that has taken place in the medical student's life over six or more years between special medical training and general cultural education is a serious weakness. The lack of touch with general affairs that doctors often exhibit is very largely the outcome of these years of high-pressure study in the most formative period of mental development. One of the most serious deficiencies in the health services is the shortage of socially-minded doctors applying their special knowledge in various branches of public affairs.

Advances in public health demand increasingly elaborate and reliable information about conditions and trends, much of which must take the form of statistics. Unfortunately, medical training has not in the past provided adequate equipment for dealing with difficult statistical problems and in some cases, for example over malnutrition, the statistical material bearing on health is extremely unsatisfactory. Either a better statistical training should be given to those concerned, notably medical officers of health, or provision should be made for trained statistical help to be made readily available to them. The need for intensive public relations work raises a similar problem.

A few other personnel problems call for brief mention. The first is the difficulty of keeping reasonably up to date the knowledge of general practitioners. Something in this direction is likely to be achieved by the Government's new scheme for subsidised "refresher" courses for panel doctors. On the other hand, problems arise in connection with specialised aspects such as brain operations, where the limited number of available cases may be dissipated over too many institutions so that the advantages of highly specialised skill are often lost, or with fractures, where the differences in recovery-rates point to disturbing discrepancies in the quality of the treatment given.

DEVELOPMENT

Tasks of the Health Services

To a large extent the various health services carry out more or less by routine a limited range of activities for which they were designed, and the enforcement and raising of standards for each is, to a large extent, suitably provided for. What is not provided for is the general co-ordination discussed earlier in this chapter, and the determination and adoption of priorities as between one service and another. Traditionally it has been left to the chance efforts of propagandists and pressure groups to pick out certain gaps as urgently needing to be filled, certain abuses to be set right, or certain discoveries to be adopted in practice. In an age of leisurely progress this was a possible, if not a very creditable procedure, but it is becoming plain that the greater complexity of modern health services and the greater demands made on them call for some more rational provision. Successive *ad hoc* campaigns for better housing conditions and slum clearance, for improved nutrition, for playing fields and physical education, for better provision for cripples and so forth, are liable to leave behind them a series of hastily improvised and half-finished jobs rather than a series of carefully thought out and thoroughly executed reinforcements to the national health. Moreover, these campaigns may unintentionally have the effect of undermining the position of the general practitioner.

Here, as elsewhere, the need is for organised and continuous thought from a point sufficiently central and close to action to ensure that all the facts are known and the practical conditions fully taken into account, but sufficiently detached to avoid sectional or biased views. Above all, any major new expenditure should be looked at with reference to the health services as a whole. In order to illustrate the type of thinking that seems necessary, rather than to propose any comprehensive policy, we discuss here very briefly the priorities problem as it appears to us at the present time.

Priorities

The first need is for a better use of existing services, and the Government has recognised this in launching a national "Use Your Health Services" campaign. While it is necessary that the general public should make more intelligent use of these services it would be regrettable if it were assumed that only the public is concerned in securing better use of the existing provision. Each branch of the health services is a user of the other branches, and many adjustments need to be made before each can make appropriate use of the rest with the maximum convenience and the minimum of friction. Not only central and local government, but hospital governors, administrators of insurance schemes, general practitioners, and many others have much still to do in removing obstacles which deter or prevent people from using health services to the best advantage. So far as members of public bodies, the Press and those who take an interest in public affairs are concerned, it is important not only to understand the broader problems of the health services, but to keep up a firm and steady pressure of criticism directed towards higher standards and improved co-ordination within the existing structure. This, however, is not nearly enough, for the existing arrangements are evidently very incomplete, and as finance is the main limiting factor it is very important that as additional funds become available they should be applied where they are most needed and will give the best value.

There seems to be widespread agreement that nutrition should be given the first priority on the ground that expenditure on nutrition does more than anything else to eliminate ill-health, and therefore to avert the need for costly and often unsatisfactory curative treatment. As we have dealt rather fully with nutrition policy in Chapter XI it must suffice here to direct attention to that chapter and to emphasise the importance of development along the lines sketched on pp. 333-338.

A rather different type of task standing high on the list of priorities is the provision of general practitioner services for dependants of insured persons. This is an essential service which is widely demanded and which many families already try to provide for themselves through voluntary insurance. As was shown in Chapter VII it could be made universal at a comparatively limited cost to the State and to the wage-earning contributors, and together with a development of nutrition policy it would powerfully assist the building up of healthier and fitter future generations. It would also take some of the load off parents with children and with small incomes, who are among the most heavily burdened groups in the community.

The national expenditure on sickness and the economic waste and misery caused by ill-health are so great that there seems to be a strong case for applying a small sum of money to the encouragement of wider studies on causes of ill-health, and of independent studies of the actual results and weaknesses of specific health services either nationally or in certain areas. We make no proposal for a new central body, as the studies we have in mind might with advantage be carried out like existing medical research, through a variety of channels. There seems no reason why it should not become a recognised and important branch of medical research to examine the organisation and efficiency of the health services from a thoroughly detached standpoint.

Many other priorities might be listed, but we must close this part of the discussion with a negative indication—a suggestion of what ought not to be a priority. There is a constant danger in a humane, and at the same time hard-up, world for too large resources to be allocated to cases which stir pity and too little to constructive and preventive purposes. It is arguable that the State and local authorities should consciously seek to offset this tendency by encouraging and where necessary, to some extent, subsidising the individual to bear his own curative risk, with the help of voluntary organisations in the background, while government, central and local, seeks primarily to prevent ill-health by such methods as advanced nutrition policies, and environmental services. Obviously the principle must not be pushed too far. In many services such as those concerned with infectious diseases, the line between the provision of curative treatment and the provision for isolation to prevent the spread of the disease is hard to draw. The same is partially true of an extended and improved general practitioner service.

ECONOMICS OF HEALTH

Finance of the Health Services

Throughout the discussion of health problems the question of finance is constantly arising. Unfortunately, while the gross cost of any particular improvement is only too plain to those who have to bear it, the finances of the British health services as a whole, and the losses arising out of ill-health, are obscure and little understood.

Nothing like a balance sheet can be drawn up of the total annual economic loss suffered by the nation through accidents and sickness, but it is important to realise what ill-health is costing. We have discussed the available data in Chapter XV, and shown that the total burden of ill-health probably runs into at least £300 millions a year.

The sick or disabled wage-earner is a triple or quadruple economic burden. In the first place he is usually causing loss of output and efficiency for the factory, office, shop or farm where he works. Next he is causing loss of income for his own family and is often cutting into future income and consumption by incurring debts. Then, if he has to be removed to an institution he is incurring an extra maintenance cost which has to be borne by someone, and finally he is giving rise to expenses such as medical attention and nursing, drugs, medicines and appliances. Of these losses the first two groups do not appear in any balance sheet, and only the third and fourth are shown even partly as the cost of sickness and accidents to the nation.

Quite apart, therefore, from such intangible factors as reduction of human suffering, it is important to bear in mind that an extra million pounds wisely spent upon health services may represent not an increase, but possibly an actual decrease even in the current national burden of sickness. To illustrate the point: good water supplies and sewerage cost us as taxpayers and ratepayers some millions of pounds to keep up, but their cost is not a net addition to our burdens because as private spenders we are saving on a moderate estimate probably at least equal sums on doctors' bills, nursing, medicines, loss of earnings and other extra items which would appear in our budget if drainage and sewage had not been provided and as a result cholera, typhoid and so forth were still rampant. A sound financial policy for health services must, therefore, take account not only of prospective economic and social gains, but also of the extent to which it is advantageous to bring openly into the public budget and to organise spending which is in any case bound to occur, although it may be disguised or hidden.

For various reasons it is often more economic to spend a given amount on health through a community channel than to spend the same amount through individual channels. This became obvious long ago in cases where the community alone could provide services such as reservoirs, sewers and infectious diseases hospitals, which promised to achieve and have, in fact, achieved more than corresponding savings in individual expenditure. The same point emerges with contributory schemes where the State proves to have certain inherent advantages which make it a lower-cost operator of insurances of a simple and universal type. The chief of these advantages are avoidance of duplication in staff and equipment, and the power to deduct contributions at source by a stamping system instead of having to send round collectors to gather in large numbers of small weekly payments.

A fine pioneer work has been done by many voluntary insurance schemes, but considerations of economy of operation reinforce, as we have shown on pages 149-154 and 234-237 the other strong arguments which exist for consolidating into National Health Insurance some at least of the insurances framed to meet universal needs. We have referred on pages 227-228 to the question of working class contributory power, and have shown that astonishing sums are collected weekly from British wage-earners through voluntary insurances providing cover against common risks. There is reason to suppose both that much more value could be got for existing payments and that the amounts collected could be increased if the result were to expand working-class purchasing power and to guard it against fluctuations in the manner of the existing social insurances. The questions, however, of capacity to pay, and of relating contributions to benefits in the case of large families require further examination, which should be possible when the results of the current Ministry of Labour collection of household budgets for the revision of the Cost of Living Index is complete. We have referred more fully to these questions in our Report on the British Social Services (pages 164-169) and on the pages above cited of the present Report.

In any discussion on the finance of health services it is important not only to try to balance the economic burdens resulting from inaction against the cost of any possible action, but also to study the most convenient and equitable ways of raising any necessary funds. Funds may be raised either through general national taxation, by local rates, by compulsory contributions from certain groups, by charitable donations regular or intermittent, or by charges and fees. National taxation appears to spread the load most widely, but where the rate of taxation is so high as at present in the United Kingdom, possibilities of financing extensions from this source are obviously limited.* Local rates are a regressive and inequitable tax. They cut heavily into the incomes of large families with low earnings, needing relatively large and therefore heavily-rated houses, and are a serious factor in producing malnutrition and ill-health. Compulsory contributions from employers are a feature of National Health Insurance, but are open to objection as constituting a tax in proportion to the amount of employment given. Charitable donations have many advantages, but it would be optimistic to expect that they can be appreciably expanded in present conditions. Charges and fees have the drawback of falling, often with crushing force, upon the family at a time when it is financially least able to bear the extra burden. For these reasons we have advocated full inquiry into the possibilities of wider compulsory contributory schemes levied on the beneficiary classes. These classes give evidence of ability and willingness to pay for suitable protection upon easy terms. A flat rate of contribution from each worker coupled with a system of allowances and treatment for dependants would both be administratively straightforward and would help to spread family burdens equitably over the working population. If it were found possible to modify the flat rate so that the worker earning £4 a week would pay more than the worker with only £2 these advantages would be increased.

There is at present much waste in the health services through reliance upon an excessive number of sources and channels of payment to maintain a given institution or function. In Chapter VIII we show how the hospitals are getting large parts of their income from contributory schemes and from patients' payments, large parts from private subscriptions, donations and legacies, and some again from local authority grants. Often a wage-earner needing a denture has to make up the cost partly from health insurance payments, partly from a hospital contributory scheme, partly from family resources, and possibly partly from a charitable organisation or public assistance. In view of the number of committees and administrators responsible and the correspondence and interviewing entailed this appears to be an extravagant and unpleasant method of equipping with false teeth people who need them.

---

* It is, of course, another question whether certain urgent measures of expansion of the health services should not be regarded as a first charge on any surplus which may be available either for additional expenditure of any sort or for tax remissions. We do not suggest that the expansion of contributory schemes can solve by any means all the financial problems of the health services.

Commercialism and the Consumer

One of the disturbing features of the British health services at the present time is the extent to which advantage is taken of the ignorance and credulity of the ordinary person by profit-making concerns. Many of the advertised proprietary health foods are no doubt excellent, but the slightest effort to consider where health expenditure and propaganda are most urgently needed must show any detached observer that a grossly excessive share of the attention and expenditure of people of all classes is claimed by those preparations and articles which happen to have behind them a vigorous profit-making interest. With the exception of voluntary hospitals the basic British health services which are carrying the real burden of the work have only just begun to achieve the volume and skill of publicity and advertising backing which would be given to, say, a new laxative, or a rupture appliance. It is particularly disturbing to observe how official and scientific pronouncements and advice on health matters are promptly seized by commercial interests to make capital for products, the consumption of which is often irrelevant to, or even directly opposed to, the straightforward following of the advice quoted. It is unfortunate that the great skill and gifts of chemists and inventors of substances and appliances useful in curing or alleviating diseases and defects should so often be misused owing to the ease with which it is still permissible in Great Britain to make profits out of exploiting ill-health by methods long since barred in such countries as, for example, Sweden. There are many reputable and responsible members of the industry whose interests are almost as opposed as are the consumer's to excesses of this sort.

The whole tone of commercial advertising and publicity is pitched so extravagantly that even a business concern with tested products of the highest value and with a more than average regard for accuracy of statement has been known to experience great difficulty in framing advertisements defensible from a scientific standpoint which can hope to win attention among the strident overtones of less scrupulous campaigns. The objections from a health standpoint to many current commercial practices may be summed up by saying that they drum into the public many points and recommendations which are at best trivial, thus making it more difficult and expensive to win attention for health advice of much greater national importance; that they deliberately over-persuade and in effect mislead the mass of uninformed consumers into purchasing many articles, foods and drinks which they would not otherwise think of purchasing, and which on health grounds they would be better without, and that they lead to the sale at high prices of many other articles, foods and drinks which have genuine value, but owing to excessive claims are often bought mistakenly for invalids, or as precautions, by families with small incomes who would, if they knew the relative values, find that they could spend a good deal of their money more beneficially on something else. It is true that certain replies to these criticisms could be made from an advertising angle, and also that a certain redress of the balance is possible through such agencies as the milk publicity campaign, the "Use Your Health Services" campaign, and the British Medical Association's measures to secure attention for the work of the general practitioner. It is, however, partly owing to the distorted views spread by the campaigns of sectional interests that it has become necessary to undertake costly and large-scale publicity for elementary products such as milk and basic services, such as those of the family doctor, which might otherwise to a large extent have been taken for granted.

We do not suggest any State control of advertising and publicity claims, but it would not be out of place if leading health authorities whose names, opinions and help are constantly being invoked in order to spread one-sided propaganda for special interests were to give more attention to this problem, and to insist wherever they have the opportunity, upon a more moderate and socially responsible line being taken. Even occasional speeches from leaders of the medical profession warning the public against excessive claims and throwing cold water on tendencies to lose a sense of proportion would have a useful influence, and would strengthen the hands of the many Press and advertising executives who are doing what they can to keep actual and implied claims within reasonable bounds. Government departments are aware of, and sometimes comment strongly on, the evil, but a much stronger line could be taken with advantage to all but a small and interested minority.

The editorial handling by the Press of health matters is often unsatisfactory, and it is questionable whether the ordinary reporter or sub-editor is properly equipped to deal with medical problems. There is too much tendency to "stunt" these subjects in newspapers without much regard for scientific values or for social needs. The Press has undoubtedly played a large part in some recent improvements in popular habits of diet and recreation, but it can hardly be said to have risen fully to the occasion. The Press Group of P E P is considering this aspect and will deal with it in a forthcoming Report. There is also a great opportunity for advertising and publicity services in promoting healthy living, and there are many in these professions who would welcome any evolution which would allow them to use their talents and energies in more constructive and less anti-social ways.

Conclusion

Throughout the health services there is a constant need for considering what is done from the standpoint of the consumer, who with all his gains from the efforts of health workers is still liable not only to be exploited and misled by commercial influences, but to be inconvenienced in order to fit in with arbitrary and unnecessary administrative arrangements, or to be treated, contrary to the best traditions of medicine, as a case rather than as a human being. In this Report we have tried, very incompletely and imperfectly to outline the British health services. The task in any complete and satisfying form is perhaps beyond the power of any existing person or organisation, and we ourselves are far from satisfied with what we have been able to do towards surveying and digesting the problem as a whole. We shall, however, feel that our efforts have served their purpose if as a result those concerned with the British health services are stimulated to look at them less as a mass of separate expedients, and more as a whole in relation to the national life, especially from the standpoint of the individual user or consumer.

What does the Report show? To sum it up, it describes how a bewildering variety of agencies, official and unofficial, have been created during the past two or three generations to work for health mainly by attacking specific diseases and disabilities as they occur, and by maintaining the sufferers. To a much more limited extent attempts have successfully been made to find out and to eradicate the social and economic causes of sickness and disability such as bad housing, sanitation and water supply, and dangerous or unhealthy working conditions.

Although all these efforts have had remarkable results they have failed to give the nation an acceptable measure of good health or to reduce the economic burden of sickness and accidents. Perhaps the most fundamental defect in the existing system is that it is overwhelmingly preoccupied with manifest and advanced diseases or disabilities and is more interested in enabling the sufferers to go on functioning in society somehow than in studying the nature of health and the means of producing and maintaining it. From this it naturally follows that millions of pounds are spent in looking after and trying to cure the victims of accidents and illnesses which need never have occurred if a fraction of this amount of intelligence and money had been devoted to tracing the social and economic causes of the trouble and making the necessary readjustments. While everyone knows that cholera, bubonic plague, malaria, scurvy and other scourges have been eliminated by the engineer or through raising the standard of living rather than by medical treatment, we are all too apt to think of health in terms of curing and treating disease, and to ignore or underrate the extent to which habits of life, the layout of our towns and buildings, labour management, transport, food manufacturing and distribution and so forth can and must be brought into the campaign for fitness. Basically health is a problem of knowledge and education. The type of survey as we have attempted should be carried out much more thoroughly as an essential and continuous function of government. There should be men and women constantly tracing back into the factory, the office, the traffic system and the home the origins of defects and diseases which are a burden on the nation. There should also be in the universities and the schools men and women evolving and conveying to the new generation an attitude of life based on healthy minds and bodies and prepared to face the implications, instead of stopping short, as we still do, at the stage of lip service.

APPENDIX I

APPENDIX I

A—TABLE OF CENTRAL AND LOCAL AUTHORITIES FOR PRINCIPAL HEALTH AND ENVIRONMENTAL SERVICES IN GREAT BRITAIN

(For special arrangements in County of London, see next table)

	ENGLAND AND WALES		SCOTLAND	
Service	Central Dept.	Local Authority	Central Dept.	Local Authority
Maternity and Child Welfare	Ministry of Health	All County Councils and County Borough Councils, and 243 County District Councils	Dept. of Health for Scotland	All County Councils and Councils of large Burghs
Supervision of Midwives	Ministry of Health	All County Councils and County Borough Councils, and 43 County District Councils	Dept. of Health for Scotland	All County Councils and Councils of large Burghs
School Medical Service	Board of Education	All County Councils and County Borough Councils, and 170 County District Councils	Dept. of Health for Scotland	All County Councils and Town Councils of 4 Cities
Notification and Control of Infectious Diseases	Ministry of Health	All County Borough Councils and County District Councils, and 62 Port Health Authorities	Dept. of Health for Scotland	All County Councils and Councils of large Burghs, 12 Port Sanitary Authorities
Infectious Disease Hospitals	Ministry of Health	Fever — Small-pox Joint Boards . . 88 — 10 Isolation Hosp. Cttees. 75 — 8 Voluntary Combins. and 40 — 43 County Councils . 6 — 11 County Boroughs . 81 — 48 County Dist. Councils 294 — 109 Port Health Authorities 7 — 9	Dept. of Health for Scotland	All County Councils and Councils of large Burghs (some combinations)
Tuberculosis	Ministry of Health	England: All County Councils and County Boroughs (3 joint committees) Wales: All County Councils and County Boroughs, but mainly carried out by King Edward VII Welsh National Memorial Association	Dept. of Health for Scotland	All County Councils and Councils of large Burghs (some combinations)
Venereal Diseases	Ministry of Health	All County Councils and County Boroughs	Dept. of Health for Scotland	All County Councils and Councils of large Burghs
General Hospitals, apart from Poor Law	Ministry of Health	10 County Councils 39 County Boroughs 2 County District Councils	Dept. of Health for Scotland	All County Councils and Councils of large Burghs
Poor Law (Medical Services and Hospitals)	Ministry of Health	All County Councils and County Borough Councils	Dept. of Health for Scotland	All County Councils and Councils of large Burghs
Factories Act	Home Office Factory Dept.	County Borough Councils and County District Councils	Home Office Factory Dept.	County Councils and Councils of large and small Burghs
Coal Mines	Board of Trade, Mines Dept.		Board of Trade, Mines Dept.	
Shops Acts	Home Office	County Councils, County Borough Councils, Municipal Borough Councils, Urban District Councils with over 20,000 inhabitants (hours, seats for assistants, early closing), All County Borough Councils and District Councils (sanitation)	Scottish Office	County Councils and Councils of large and small Burghs
Blind Welfare	Ministry of Health	All County Councils and County Borough Councils	Dept. of Health for Scotland	All County Councils and Councils of large Burghs
Mental Health Services: Mental Disorders	Board of Control	23 single County Boroughs City of London Corporation 19 single County Councils 29 combinations, involving: 53 County Boroughs 45 County Councils 14 Municipal Boroughs	General Board of Control for for Scotland	All County Councils and Councils of large Burghs (some combinations)

TABLE A—*continued*

Service	ENGLAND AND WALES		SCOTLAND	
	Central Dept.	Local Authority	Central Dept.	Local Authority
Mental Deficiency	Board of Control	63 County Boroughs 57 County Councils 4 combinations, involving: 20 County Boroughs 6 County Councils	Scottish Education Dept.	Education Authorities, Public Assistance Authorities (some combinaions)
Housing	Ministry of Health	County Councils, County Borough Councils, County District Councils	Dept. of Health for Scotland	County Councils and Councils of large and small Burghs
Sanitation	Ministry of Health	County Borough Councils and County District Councils	Dept. of Health for Scotland	Councils of large and small Burghs
Water Supply	Ministry of Health	Local Authorities supplying: (*a*) Under the Public Health Act . 542 (*b*) Under local Acts 261 —— 803 Joint Authorities supplying: (*a*) Under the Public Health Act . 16 (*b*) Under local Acts 35 — 51 Statutory Companies. 173 Non-statutory Companies . . 70 Private Proprietors . 1,068 —— 2,165	Dept. of Health for Scotland	Special Water Supply Districts in Counties 409 Burghs . . . 166 Water Boards . . 7 Combinations of Counties and Burghs . 8 Combinations of Burghs 4 Non-Burghal Suppliers under Private Acts . 7 Water Company . 1 —— 602 Suppliers with separate distribution system
River Pollution	Ministry of Health	County Borough Councils and County District Councils, 7 other authorities, e.g. Port of London Authority, Thames Conservancy	Dept. of Health for Scotland	County Councils and Councils of large and small Burghs
Street Cleaning and Refuse Removal	Ministry of Health	County Borough Councils and County District Councils	Dept. of Health for Scotland	County Councils and Councils of large and small Burghs
Atmospheric Pollution	Ministry of Health, Direct Administration Alkali Works Registration Act	County Borough Councils and County District Councils	Dept. of Health for Scotland, Direct Administration Alkali Works Registration Act	County Councils and Councils of large and small Burghs
Foods and Drugs	Ministry of Health	County Councils, County Borough Councils, 57 Municipal Borough Councils	Dept. of Health for Scotland	County Councils and Councils of large and small Burghs
Poisons	Home Office	County Councils, County Borough Councils	Home Office	County Councils and Councils of large Burghs
Health Insurance	Ministry of Health	146 Local Insurance Committees, 6,253 Approved Societies and Branches	Dept. of Health for Scotland	54 Local Insurance Committees, 368 Approved Societies and Branches

On December 1, 1937, there were—

In England and Wales:

County Councils	62	(including the L.C.C.)
County Borough Councils	83	
†Municipal Borough Councils	300	†County Districts
†Urban District Councils	602	
†Rural District Councils	478	
Council of the Isles of Scilly	1	

In Scotland:

County Councils 35, Town Councils of large Burghs 24, Councils of small Burghs 171

County Councils have power to delegate some of their powers to special districts, but this does not include power to delegate their authority in connection with the Maternity and Child Welfare Services, the Infectious Diseases Services, Venereal Diseases Services, Tuberculosis Services, School Health Service, Hospital Service, Poor Law Medical Service, and the Lunacy and Mental Deficiency Services.

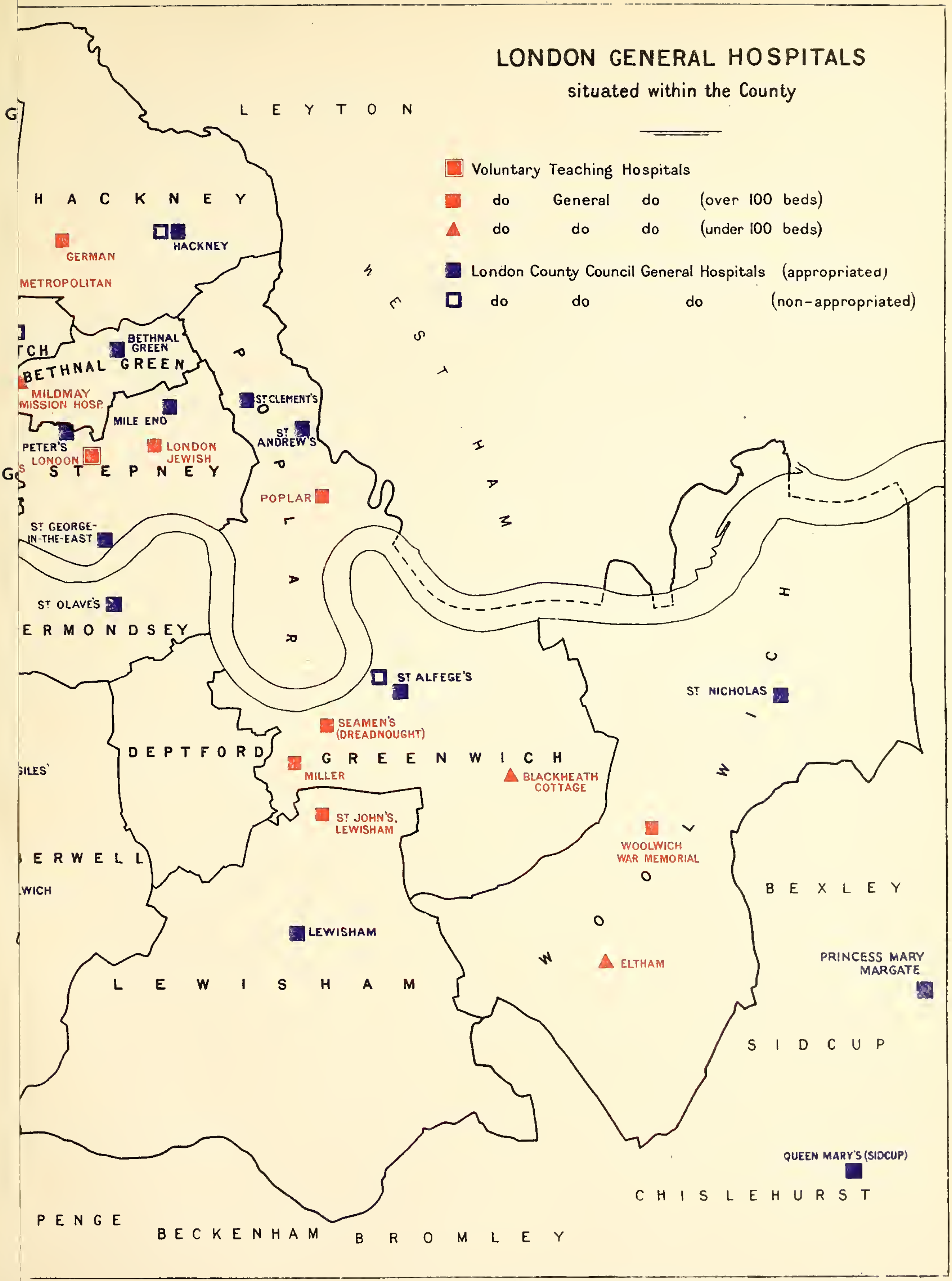
APPENDIX I

B—ALLOCATION OF POWERS CONNECTED WITH THE HEALTH SERVICES IN THE COUNTY OF LONDON

London County Council	*Metropolitan Borough Councils* (28) *and City of London Corporation*	*City of London Corporation: powers not shared by Metropolitan Boroughs*
Supervision of Midwives	Maternity and Child Welfare	
Medical Inspection and Treatment of School Children		
Infectious Diseases Hospitals	Infectious Diseases, Notification and Prevention	
	Vaccination	
Tuberculosis Residential Treatment	Tuberculosis Dispensaries Treatment	
Venereal Diseases Treatment		Venereal Diseases Treatment
Poor Law (including District Medical Services and some hospitals)		
General Hospitals		
Nursing Homes Registration		
Blind Welfare		
Mental Disorders		
Mentally Defective		Mentally Defective (City maintains its own hospital)
	Factories Act	
Shops (hours, seats and early closing)	Shops (sanitary conditions)	Shops (hours, seats and early closing)
Drainage (main)	Drainage (local)	
River Pollution	Refuse Removal and Disposal Street Cleaning	
Smoke Nuisance Prevention	Smoke Nuisance Prevention	
	Food and Drugs Adulteration	
	Poisons	
Housing (larger schemes within and without the county; re-development areas)	Housing (local schemes re-development areas) and general supervision of housing conditions	Housing re-development and additional powers
		Port Health

N.B.—Responsibility for providing London with water rests on the Metropolitan Water Board.

APPENDIX II



This Map is reproduced (with slight modifications to bring it up-to-date) by kind permission of the Voluntary Hospitals Committee, County of London, the L.C.C.; Messrs. Stanford's Geographical Establishment, London; and Messrs. P. S. King & Sons.

GENERAL HOSPITALS IN THE COUNTY OF LONDON

SEPTEMBER, 1937

VOLUNTARY HOSPITALS

General Hospitals with Undergraduate Schools	*No. of Beds*
Charing Cross Hospital	293
Guy's Hospital	692
King's College Hospital	420
London Hospital	839
Middlesex Hospital	592
University College Hospital	617
Royal Free Hospital	327
St. Bartholomew's Hospital	727
St. George's Hospital	334
St. Mary's, Paddington	356
St. Thomas's Hospital	682
Westminster Hospital	258

General Hospitals without Undergraduate Schools

100 *Beds or more:*	
Bolingbroke Hospital	135
Dreadnought Hospital	257
German Hospital	219
Hampstead General and N.W. London Hospital	138
Hospital of St. John and St. Elizabeth	158
London Homœopathic Hospital	200
London Jewish Hospital	109
Metropolitan Hospital	150
Miller General Hospital	167
National Temperance Hospital	158
Poplar Hospital for Accidents	122
Royal Northern Hospital	384
St. John's Hospital, Lewisham	102
West London Hospital	239
Woolwich and District War Memorial Hospital	112

Under 100 *Beds:*	
Battersea General Hospital	85
Blackheath and Charlton Hospital	31
Catholic Nursing Institute	21
Eltham and Mottingham Cottage Hospital	39
French Hospital	70
Italian Hospital	53
Mildmay Memorial Hospital	47
Mildmay Mission Hospital	58
Princess Beatrice Hospital	81
Putney Hospital	75
Weir Hospital	30

LONDON COUNTY COUNCIL HOSPITALS

Many of the hospitals belonging to the L.C.C. are situated outside the administrative county. Their location is shown on the map.

Acute General Hospitals ("Appropriated")	*No. of Beds*
Archway	564
Bethnal Green	650
Dulwich	728
Fulham	567
Hackney	772
*Hammersmith (South Block)	458
Highgate	540
Lambeth	1,114†
Lewisham	781
Mile End	542
New End	260
Paddington	578
St. Alfege's	622
St. Andrew's	620
St. Charles'	752
St. George-in-the-East	410
St. Giles'	810
St. James'	603
St. Leonard's	540
St. Luke's, Chelsea	390
St. Mary Abbots	547
St. Mary, Islington	838
St. Nicholas'	831
St. Olave's	688
St. Pancras	380
St. Peter's	404
St. Stephen's	748

* *Hammersmith Hospital (North Block) is under reconstruction for the accommodation of approx. 277 sick (acute and chronic). At present it is in partial occupation for 84 chronic sick and sick staff—see below.*

† *662 acute 252 chronic*

Convalescent Hospitals	*No. of Beds*
Queen Mary's, Sidcup (for males)	530
St. Benedict's (for females)	318
Princess Mary's Convalescent Home, Margate (under reconstruction to provide 237 beds for females)	

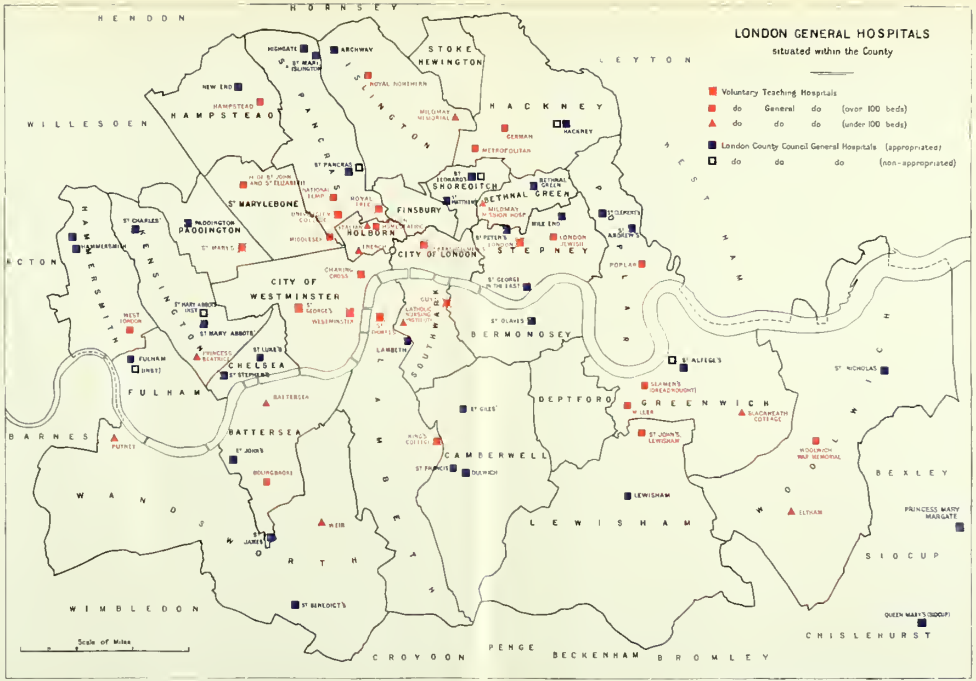
Chronic Sick Hospitals ("Appropriated")	
St. John's	637
Hammersmith (North Block) (temporarily under reconstruction	84
St. Clement's	411
St. Francis'	647*
St. Matthew's	627†

* *Including a nursery for healthy babies of 45 cots.*

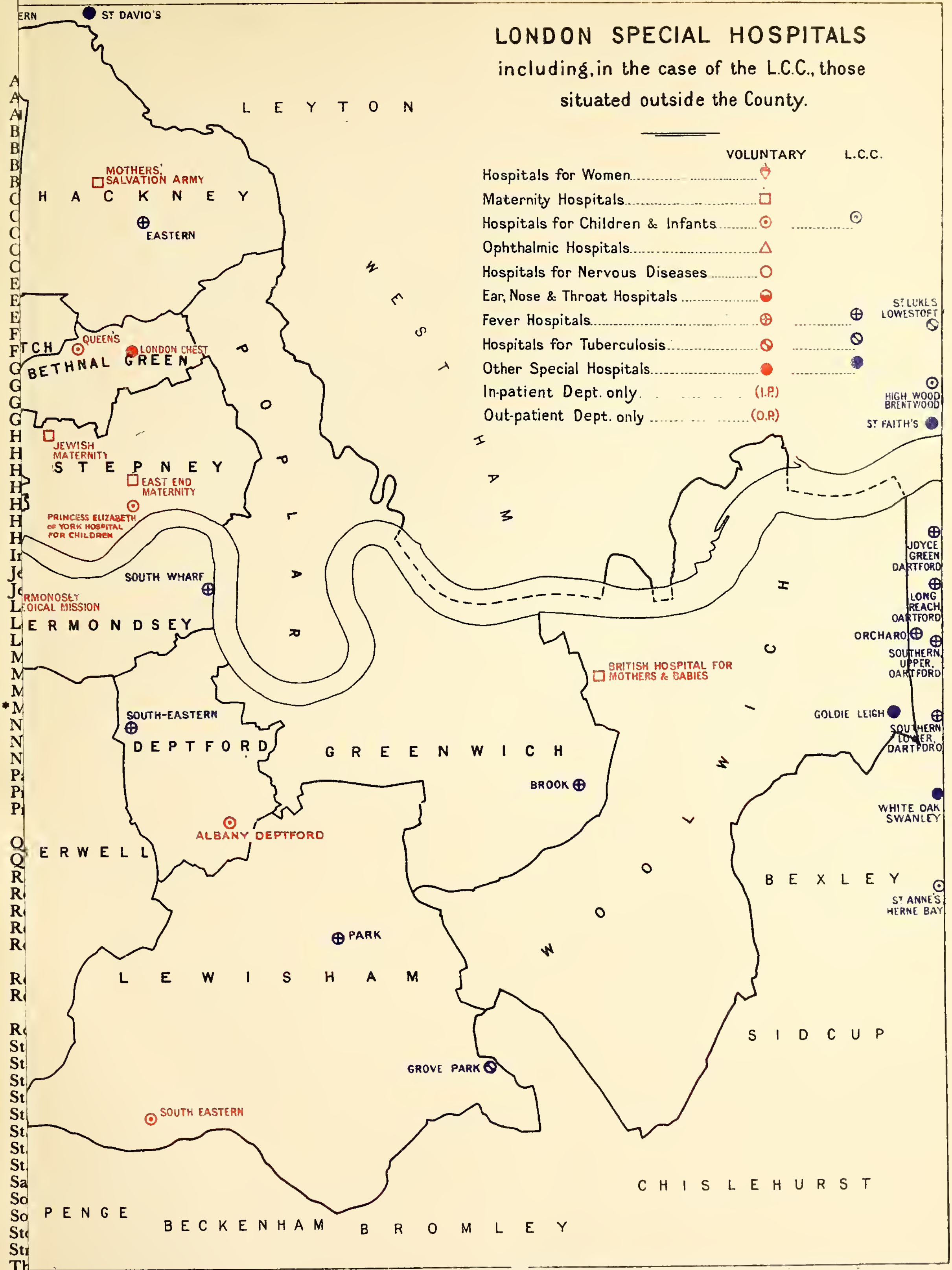
† *Including a nursery for healthy babies of 26 cots.*

Public Health Institutions Allocated for Use as Hospitals for Chronic Sick ("Non-Appropriated")

	Total Accommodation	*No. of Beds for Chronic Sick and Mental Patients*
Fulham Institution	458	104
Hackney Institution	452	394
St. Alfege's Hospital (Institution)	828	345
St. Leonard's Hospital (Institution)	135	—
St. Mary Abbots Hospital (Institution)	440	228
St. Pancras Hospital (Institution)	556	271



This Map is reproduced (with slight modifications to bring it up-to-date) by kind permission of the Voluntary Hospitals Committee, County of London, the L.C.C., Messrs. Stanford's Geographical Establishment, London, and Messrs. P. S. King & Sons.



LONDON SPECIAL HOSPITALS

including, in the case of the L.C.C., those situated outside the County.

	VOLUNTARY	L.C.C.
Hospitals for Women	♀	
Maternity Hospitals	□	
Hospitals for Children & Infants	⊙	⊙
Ophthalmic Hospitals	△	
Hospitals for Nervous Diseases	○	
Ear, Nose & Throat Hospitals	◒	
Fever Hospitals	⊕	⊕
Hospitals for Tuberculosis	⊘	⊘
Other Special Hospitals	●	●
In-patient Dept. only	(I.P.)	
Out-patient Dept. only	(O.P.)	

This Map is reproduced (with slight modifications to bring it up-to-date) by kind permission of the Voluntary Hospitals Committee, County of London the L.C.C.; Messrs. Stanford's Geographical Establishment, London; and Messrs. P. S. King & Sons.

SPECIAL HOSPITALS IN THE COUNTY OF LONDON

SEPTEMBER, 1937

VOLUNTARY HOSPITALS

	No. of Beds
Annie McCall Maternity Hospital	50
Albany Deptford Babies' Hospital	24
All Saints Genito-Urinary Hospital	41
Baby Hospital, Kensington	34
Belgrave Hospital for Children	76
Bermondsey Medical Mission Hospital	20
British Hospital for Mothers and Babies	52
Central London Ophthalmic Hospital	51
Central London Throat, Nose and Ear Hospital	78
Chelsea Hospital for Women	104
Cheyne Hospital for Children	67
City of London Maternity Hospital	79
East End Maternity Hospital	59
Elizabeth Garrett Anderson Hospital	105
Evelina Hospital for Sick Children	80
Florence Nightingale Hospital	38
Fulham Babies' Hospital	21
General Lying-in Hospital	50
Golden Square Throat, Nose and Ear Hospital	101
Gordon Hospital	62
Grosvenor Hospital for Women	45
Hospital for Consumption	368
Hospital for Epilepsy	82
Hospital for Sick Children	257
Hospital for Tropical Diseases	76
Hospital for Women	81
Hostel of God	55
Hostel of St. Luke	30
Infants' Hospital	100
Jewish Home of Rest	45
Jewish Maternity Hospital	38
London Chest Hospital	190
London Fever Hospital	186
London Lock Hospital	74
Marie Curie Hospital	39
Metropolitan Ear, Nose and Throat Hospital	22
Mothers' Hospital of the Salvation Army	160
*Mount Vernon Hospital	130
National Hospital for Diseases of the Heart	46
National Hospital, Queen Square	186
North Islington Infant Welfare Wards	18
Paddington Green Children's Hospital	55
Princess Elizabeth of York Hospital for Children	135
Princess Louise Kensington Hospital for Children	81
Queen Charlotte's Maternity Hospital	130
Queen's Hospital for Children	155
Radium Institute	38
Royal Cancer Hospital	157
Royal Dental Hospital	10
Royal Eye Hospital	46
Royal London Ophthalmic Hospital (Moorfields)	200
Royal National Orthopaedic Hospital	446
Royal Waterloo Hospital for Children and Women	127
Royal Westminster Ophthalmic Hospital	100
St. Columba's Hospital	30
St. John's Hospital for Diseases of the Skin	40
St. Luke's Hospital for Advanced Cases	48
St. Mark's Hospital	72
St. Paul's Hospital	33
St. Peter's Hospital	39
St. Saviour's Hospital	21
St. Thomas's Babies' Hostel	22
Samaritan Free Hospital	88
South-Eastern Hospital for Children	100
South London Hospital for Women	140
Stoke Newington Home Hospital for Women	31
Streatham Babies' Hospital	21
The Tavistock Clinic	13
Victoria Hospital for Children	138
West End Hospital for Nervous Diseases	70
Western Ophthalmic Hospital	35

LONDON COUNTY COUNCIL HOSPITALS

Many of the hospitals belonging to the L.C.C. are situated outside the administrative county. Their location is shown on the map.

Hospitals for Infectious Diseases

	No. of Beds
Brook	552
Eastern	621
Grove	610
Northern	736 *Part for fever, 338 beds, part for tuberculosis, 100 beds; part for encephalitis lethargica, 298 beds.*
North-Eastern (under reconstruction)	510
North-Western	410
Park	632
Southern—	
Upper	757
Lower	767
South-Eastern	484
South-Western	363
Western	517
River Hospitals—	
Joyce Green	986
Long Reach	248
Orchard	664
South Wharf Smallpox Receiving Station	24

Hospital for Venereal Diseases

Sheffield Street Hospital	102 *including 20 cots*

Tuberculosis Hospitals

Colindale hospital (for men)	349
St. George's Home (for women)	50
Grove Park Hospital	322
Heatherwood Hospital, Ascot (for children)	244
High Wood Hospital for Children	482 *272 beds tuberculosis* *210 rheumatism*
King George V Sanatorium (for men)	232
Millfield, Rustington, Convalescent Hospital (for children)	98
Pinewood Sanatorium (for women)	160
St. Luke's Hospital, Lowestoft	210

Epileptic Hospitals ("Appropriated")

St. David's (for males)	328
St. Faith's (for females)	427

Ophthalmia-neonatorum and Vulvo-vaginitis Hospital ("Appropriated")

St. Margaret's	81

Children's Hospitals

General Hospitals

Norwood Hospital for Children ("Appropriated")	210
Queen Mary's Hospital for Children	1,284 *260 beds for surgical tuberculosis*
The Downs Hospital for Children	360 *180 beds for rheumatism*

Ophthalmia

White Oak Hospital	364

Ringworm and Other Contagious Diseases

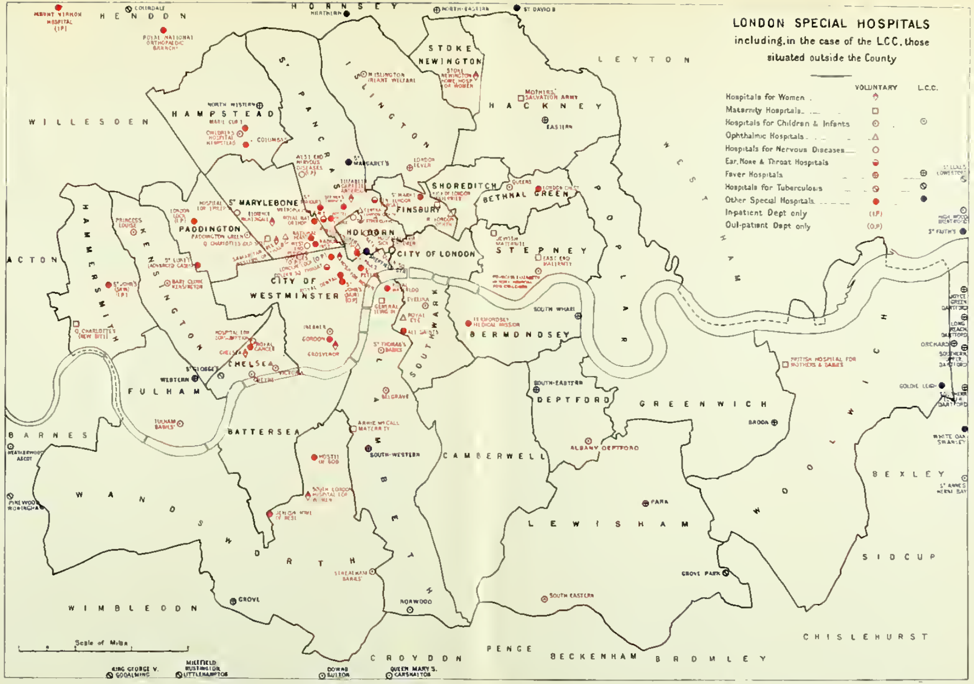
Goldie Leigh Hospital	248 *50 beds for convalescents*

Convalescent

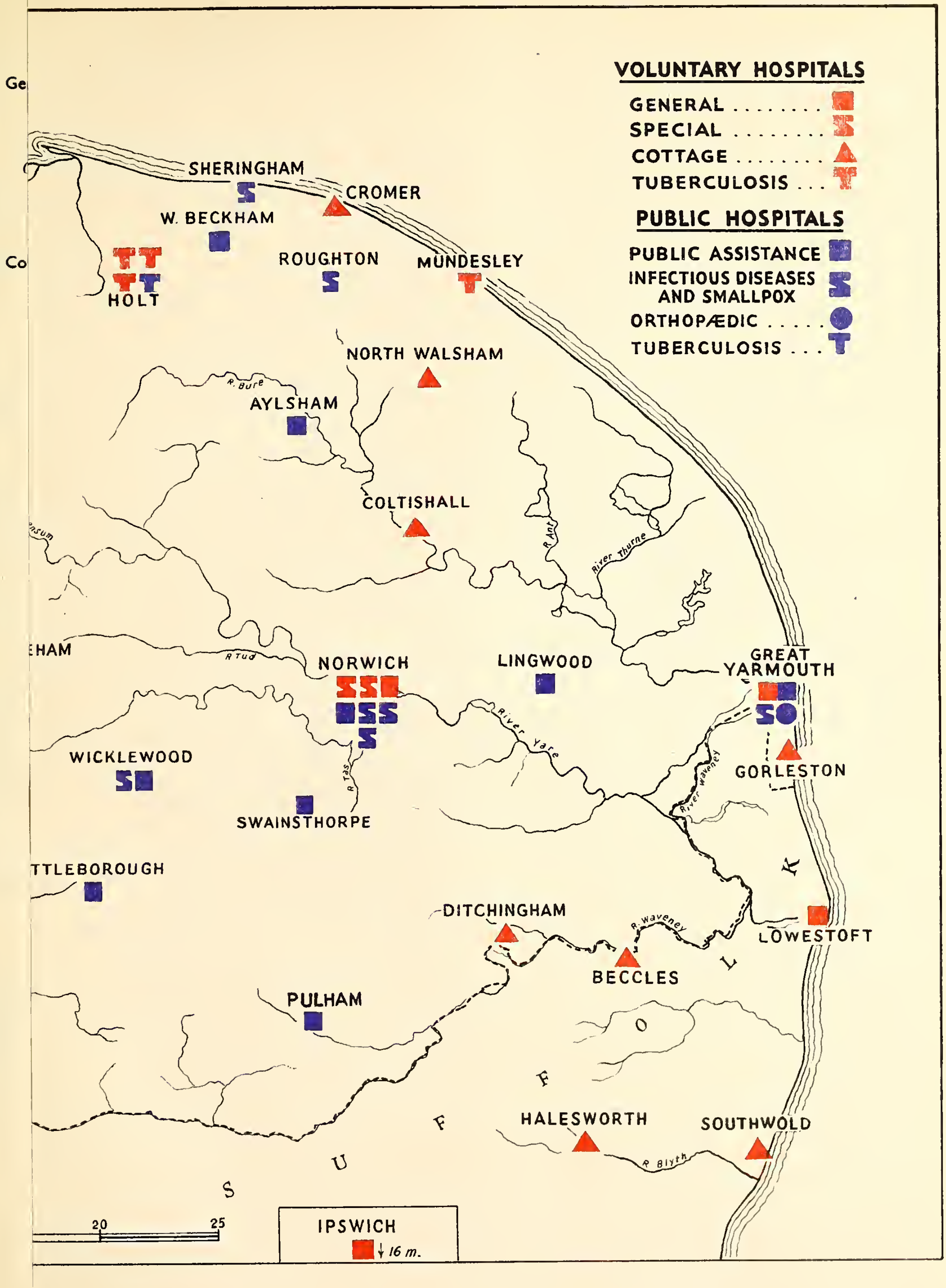
St. Anne's Home	127

---

* *Radium Institute acts as Out-patient Department*



This Map is reproduced (with slight modifications to bring it up-to-date) by kind permission of the Voluntary Hospitals Committee, County of London the L.C.C., Messrs. Stanford's Geographical Establishment, London and Messrs. P. S. King & Sons


Ge
Co
VOLUNTARY HOSPITALS
GENERAL
SPECIAL
COTTAGE
TUBERCULOSIS
PUBLIC HOSPITALS
PUBLIC ASSISTANCE
INFECTIOUS DISEASES AND SMALLPOX
ORTHOPÆDIC
TUBERCULOSIS
SHERINGHAM
CROMER
W. BECKHAM
ROUGHTON
MUNDESLEY
HOLT
NORTH WALSHAM
R. Bure
AYLSHAM
COLTISHALL
R. Ant
River Thurne
nsum
HAM
R. Tud
NORWICH
LINGWOOD
GREAT YARMOUTH
River Yare
WICKLEWOOD
R. Tas
SWAINSTHORPE
GORLESTON
River Waveney
TTLEBOROUGH
DITCHINGHAM
R. Waveney
BECCLES
LOWESTOFT
PULHAM
HALESWORTH
SOUTHWOLD
R. Blyth
S U F F O L K
20
25
IPSWICH
16 m.

HOSPITALS IN THE COUNTY OF NORFOLK

VOLUNTARY HOSPITALS

General Hospitals	No. of Beds
Norfolk and Norwich	370
Fletcher Convalescent Home, Cromer	64
West Norfolk and King's Lynn	112
Great Yarmouth	72
Outside the County:	
Addenbroke's, Cambridge	312
East Suffolk and Ipswich	349
Lowestoft and North Suffolk	80
Wisbech and North Cambridgeshire	30
Cottage Hospitals	
Coltishall and District	7
Cromer	35
North Walsham	13
All Hallows, Ditchingham	23
Swaffham	7
Thetford	9
Watton	5
Wells-next-Sea	6

Cottage Hospitals (continued)	No. of Beds
Outside the County:	
Beccles and District War Memorial	23
Gorleston	15
Patrick Stead, Halesworth	22
Southwold	14
Special Hospitals	
Norfolk and Norwich Eye Infirmary (Committee of Management of eight, four of whom are Norfolk and Norwich Hospital Governors)	22
Jenny Lind Hospital for Children, Norwich	80
Tuberculosis	
Bramblewood Sanatorium, pulmonary (women and girls over 14) Holt	42
Children's Sanatorium, pulmonary, Holt	48
Kelling Sanatorium, Holt	115
The Sanatorium, Mundesley (run similarly to a private nursing home)	58

PUBLIC HOSPITALS AND INSTITUTIONS (used for sick persons)

Public Assistance Institutions	Authority	No. of Beds
Attleborough	County Council	50
Aylsham	" "	97
West Beckham	" "	49
Downham Market	" "	67
Gayton	" "	20
Gressenhall	" "	100
King's Lynn	" "	115
Lingwood	" "	61
Pulham	" "	96
Swainsthorpe	" "	174*
Thetford	" "	69
Wicklewood	" "	76

* *Reserved entirely for cases of senile dementia*

Public Assistance Institution, Norwich	County Borough Council	303
" " " Great Yarmouth	" " "	311

Provision for maternity cases is made in some of the County Councils' institutions and in the two institutions provided by the County Borough Councils.

Special Hospitals

Hospitals for Infectious Diseases

Roughton	County Council And Cromer Urban District	6†
Roughton	Sheringham Urban District North Walsham Urban District Erpingham Rural District	8†

† These two hospitals are to be run as one in future

	And	
Wicklewood	Forehoe and Henstead Rural District	6
Hunstanton	Hunstanton Urban District	3

These will be closed when the County Isolation Hospital is ready

	And	
King's Lynn	King's Lynn Municipal Borough *To be extended to 17 beds*	10
King's Lynn, Smallpox Hospital	" " "	8

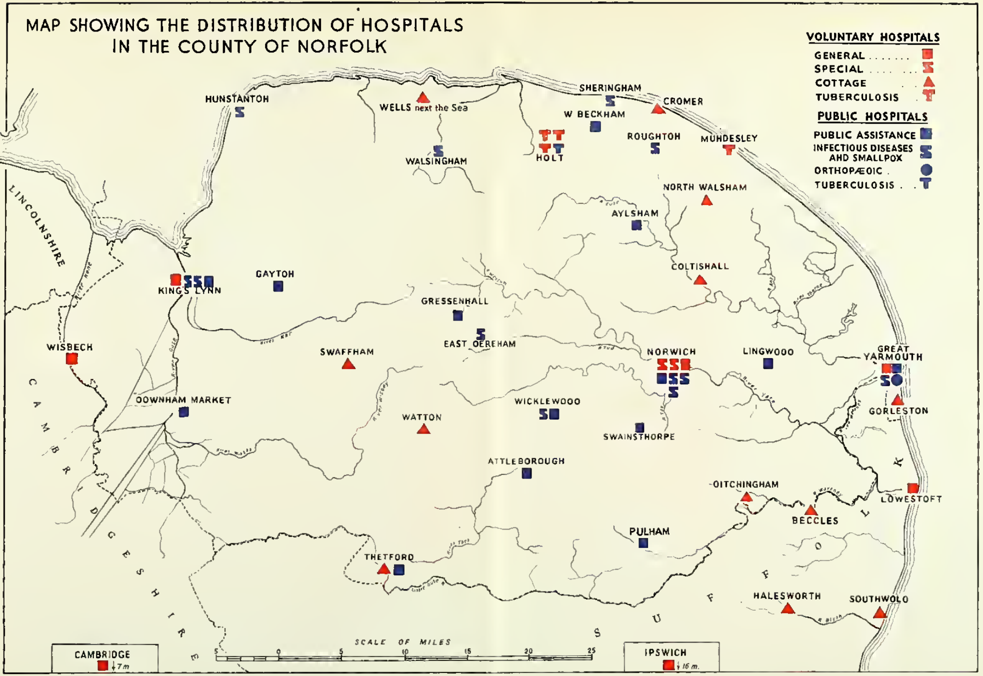
The County Council is adopting part of the late Walsingham Public Assistance Institution to serve the remaining part of the county as a smallpox hospital.

The County Council is erecting a Central Isolation Hospital at East Dereham. This will have 60 beds.

Isolation Hospital, Norwich	Norwich County Borough Council	94
Smallpox Hospital, Norwich	" " " "	20
Isolation Hospital, Great Yarmouth	Great Yarmouth County Borough Council	57

• • • • • • • • • • • • • • •

Melton Lodge Orthopædic Hospital, Great Yarmouth	Norfolk County Council	21
"Home Place" Tuberculosis Sanatorium, Holt	Leicester County Borough Council	26
City of Norwich Maternity Home	Norwich County Borough Council	15



MAP SHOWING THE DISTRIBUTION OF HOSPITALS IN THE COUNTY OF NORFOLK

INDEX

A

PAGE

Aberdeen and District Milk Marketing Board .. 329
Aberdeen hospitals: 254, 256, 260
    co-ordination 398
Abortion 94, 95, 105
Accidents: 370, 377
    among small children 116
    industrial .. .. .. 65, 71 *seq.*, 299, 303
    mines 75
    railways 76
    rehabilitation 77, 85, 259
    young persons 73
Advertising and the Health Services 359, 396, 412
After-care: accidents 85, 259
    cripples 300
    mental disorders 274
    School Medical Service 122, 123, 248
    tuberculosis 288, 289
Air Force Medical Services 158
Alkali Inspectors of Ministry of Health 49
Almoners, Hospital: 238, 241, 242
    Institute of 242
Ambulance Services: 247, 265
    for crippled children 300
    in the Highlands and Islands area 365
Ante-natal care: 96, 109, 224
    institutional provision 98
Ante-natal clinics: 96, 97, 109
    dental services 183
Anti-Noise League 49
Approved institutions for medical benefit .. 151, 201
Approved societies (*see* National Health Insurance)
Army: medical services 158
    nurses 171
Association of Dispensing Opticians 188
Association Professionnelle Internationale des Médecins 133
Asthma Research Council 311
Asylums: *see* mental hospitals
    Royal Asylums, Scotland 273
Athlone, Earl of 167
Atmospheric pollution 47
Axham, Dr. 131

B

Barber-Surgeons' Guild 127
Barker, Sir Herbert 131
Biophysical assistants 192
Birkett, Norman 95
Birmingham Hospitals Contributory Association .. 235
Birth control: 105, 314, 316
    clinics 399
Blind persons: 302-306
    Advisory Committee on the Care and Supervision of the Blind 30
    College of Teachers of the Blind .. 305

PAGE

Blind persons:
    cost of 304
    employment of 303-305
    education of: 302, 304
    old age pensions .. .. 303 ,304
    and voluntary bodies 303, 305
Blind welfare 302-306
Blind-deaf persons 306
Blindness:
    Departmental Committee on Cause and Prevention of Blindness 187
    causes 302
    incidence 302
    and venereal diseases 289
Board of Control 272, 276
    (*See also* mental ill-health.)
Board of Education (*see* school medical service and physical education).
Board of Registration of Medical Auxiliaries 193
Bowley, Prof. A. L. 325
Boy Scouts' Association 343, 357
Boys' Brigade 343
Bradbury, Dr. F. C. S. 38, 285
Braille 303, 305
Bray, J. E. 389
Brighton Guardianship Society 278
British College of Nurses 169
British Dental Association 180, 182
British Dental Journal 182
British Hospitals Association 246, 247
British Hospitals Contributory Schemes Association: 185, 234 *seq.*, 268
    Ophthalmic services 189
British Medical Association: .. .. .. 132 *seq.*
    Committee on Fractures 77, 135, 259
    Committee on Nutrition 135, 324
    Committee on Physical Education .. 135, 338 *seq.*
    Constitution of 132
    and control of the trade in medicine 61
    and district medical services 155
    ethical code, regulating conduct of specialists and consultants .. 160
    ethical rules of partnerships and assistantships 143
    Family Meals and Catering 332
    foundation of .. 129, 132
    and friendly societies .. 150
    and hospital contributory schemes .. 236 *seq.*
    Hospital Policy 244, 248, 264

British Medical Association:
  and industrial medical officers, ethical rules 82, 83, 87
  and maternity and child welfare services 102, 110
  and medical aid societies 150
  and medical auxiliaries 192 *seq.*
  and medical discipline 134
  and medical education 137
  and medical ethics 82, 134, 143, 160
  and medical research 312
  National Ophthalmic Treatment Board 188
  Ophthalmic Committee 186, 187
  and Poisons Board 190
  Proposals for General Medical Service of the Nation 159, 161, 235
  and public medical services 153
  and public relations 412
  Secret Remedies 1909, *More Secret Remedies*, 1912 59
  and Trades Union Congress Joint Committee of 86, 151
British Medical Journal 133, 135, 136
British Optical Association 186, 187
British Post-Graduate Medical School 30, 140, 231, 311
British Psycho-Analytical Society 353 *seq.*
British Red Cross Society 231, 246, 266, 357, 358
British Social Hygiene Council 291, 358
British Social Services, P E P Report 66, 398, 411
Brussels Agreement 1924 291

C

Campbell, Dame Janet 108
Cancer: 293 *seq.*, 378, 381, 384
  diagnosis 295, 297, 298
  incidence 295
  industrial 78, 297
  lack of treatment facilities 296, 297, 298
    for middle class 298
  and medical research 295, 309, 311
  mortality 293, 378
  prevention 297
  treatment: limits of centralisation 298
  voluntary bodies 297
  X-ray therapy 295, 298
Carr-Saunders, Prof. A. M. 316
Cassidy, Sir Maurice 352
Cave Committee 232, 247-249
Central Association for Mental Welfare 278
Central Bureau of Hospital Information 231 *seq.*, 246
Central Council for Care of Cripples 301
Central Council of District Nursing in London 178
Central Council for Health Education 30, 358
Central Council of Recreative Physical Training 343, 347, 348
Central Departments and the Factories Act 80, 81
Central Departments and the Health Services 28 *seq.*
Central Midwives Board (*see* midwives) 31, 100 *seq.*, 171
Central Practitioners Fund 144
Certifying Factory Surgeons, Association of 86
Charity Commissioners 32, 239
Charity Organisation Society 152, 185, 204, 268
Chartered Society of Massage and Medical Gymnastics 192, 193, 390
Chemists (*see* pharmacy)
Child Guidance Clinics 274, 353, 402
Child Guidance Council, London 353
Children's Country Holiday Fund 123
Children, mortality of 375
Chiropodists 192, 193
Church Lads' Brigade 343
Clinical units and medical research 139, 312
Clinics: *see* maternity and child welfare, tuberculosis, fractures, birth control, sight-saving, child guidance, cripples, dental, etc. 183, 300
College of Pharmacy 190
Composition and Description of Food, Departmental Committee on 55
Consultants (*see* specialists)
Consultative Board on Medical and Allied Services of the Scottish Board of Health 162
Consultative Committee on Medical and Allied Services to Welsh Board of Health 165
Consultative Council on Medical and Allied Services of the Department of Health for Scotland, Report of, 1933 262
Contract practice 149 *seq.*, 194
Convalescent homes 264, 266 *seq.*, 389
Cost of ill-health 387 *seq.*
Cost of Living Index 411
Cottage hospitals (see hospitals)
Crèches (*see* maternity and child welfare) 115
Crippled children 299, 300
Cripples: 298-302
  administrative arrangements 302
  education 299, 300
  and local authorities 300
  Scotland 301
Cripple settlements 301
  training 301, 306
Cripples and voluntary work 301
Crippling: causes of 298
  incidence 299

D

Day nurseries 115, 116, 118
Deaf and dumb: 306-308
  education 307
  finance 307
  research 308
  statutory provision 307
  voluntary provision 307
Deaf children 306
Deafness: incidence 306
Dental associations 182
Dental Benefit Council 185
Dental Board of United Kingdom 31, 181, 358
  (*see also* General Medical Council)
Dental Clinics 183
Dental decay: 182
  need for treatment 182, 183
  and nutrition (*see* nutrition)

PAGE

- Dental hospitals .. 183
- Dental Register .. 182
- Dental services: .. 180 *seq.*
  - out-patients departments .. 183
  - voluntary insurance .. 185
- Dental Society, Incorporated (*see* Incorporated Dental Society)
- Dental treatment for tuberculosis patients .. 287
- Dentists, Register of .. 180
- Dentistry: .. 180 *seq.*
  - national expenditure on .. 388-390
- Department of Scientific and Industrial Research 47, 49, 80
- Dependants of insured persons .. 144, 211, 213 *seq.*, 409
- Differential prices: potatoes .. 331 (*see also* milk)
- Dispensaries (free and provident) .. 152
- Dispensing (*see* pharmacy)
- Distribution and Prices of Agricultural Products, Departmental Committee on .. 331
- District medical officers .. 154 *seq.*
- District Nursing: .. 98, 174 *seq.*
  - finance .. 176
  - and The Highlands and Islands Medical Service .. 179, 364
  - hospital contributory schemes 176, 180, 235
  - midwifery services 102, 110 *seq.*, 176, 178
  - provident schemes .. 176, 177
  - relations with local authorities 176-177
  - remuneration .. 175
  - Scotland .. 178
  - training for .. 175
- Doctors' clubs .. 152
- Druggists (*see* pharmacy)
- Dumb (*see* deaf and dumb)

E

- Eichholz, Dr. .. 306
- Electrical treatment .. 192
- Emigration and the British population .. 314
- Empire Rheumatism Council .. 311
- Employees, medical selection of .. 88
- Entrance to and Exit from Industry, P E P Reports .. 66
- Environmental conditions in factories, mines, etc. 69 *seq.*
- Eugenics (*see* Genetics)
- Eugenics Society .. 315
- Examining surgeon .. 79, 82
- Expectation of life .. 369, 381

F

- Factories Act, 1936 .. 67 *seq.*
- Factories Act, administration of .. 80, 81
- Family, the, and health .. 360
- Feeble-minded (*see* mental deficiency)
- Fever nurses (*see* nurses)
- Feversham Committee .. 275, 278
- Florence Nightingale International Foundation .. 169
- Food: advertising of .. 54
  - composition of .. 54
  - Council .. 331, 333

PAGE

- Food: advertising of
  - and Drugs (Adulteration) Act .. 50 *seq.*, 54, 58
  - and drug authorities .. 51
  - grading of .. 54
  - poisoning .. 50, 51
  - supply, inspection of .. 51, 53
  - supply, protection of .. 50 *seq.*
  - supply, protection of and medical officers of health .. 53
  - *see* nutrition
- Fracture clinics .. 77, 259, 299
- Fractures, Committee of the British Medical Association on (*see* British Medical Association) .. 77
- "Free choice of doctor" system .. 145, 155, 226
- Freud's .. 351
- Friendly societies: .. 195, 403
  - additional medical insurance 142, 149
  - voluntary sickness insurance .. 204

G

- Gardiner, Elizabeth .. 268
- Garland, Dr. .. 352
- General Hospitals: *see* public hospitals and voluntary hospitals
  - co-operation with maternity hospitals .. 113
  - dental services .. 183
  - out-patients' departments, tuberculosis .. 286
  - size of .. 244
- General Medical Council: 31, 86, 103, 129 *seq.*, 137 *seq.*, 354
  - and dentists .. 129, 180, 181
  - and licensing authorities .. 130
  - and Poisons Board .. 190
  - as judicial authority .. 130
- General Nursing Council .. 31, 166 *seq.*, 245
- General practitioner: .. 142 *seq.*
  - co-operation with specialist and consultant services .. 161 *seq.*
  - and the Highlands and Islands Medical Service .. 364
  - and mental health .. 351
  - position in the health services 161 *seq.*
  - relation to National Health Insurance .. 145 *seq.*
  - remuneration .. 145
  - role of .. 396
  - services—extension of .. 409
- Genetics: .. 313 *seq.*
  - and the family .. 318
  - and mental deficiency .. 315
  - and research .. 318
- Girl Guides' Association .. 343, 357
- Girls' Life Brigade .. 343
- Glasgow School Health Scheme .. 36
- Gloucestershire Medical Services Schemes 165, 256, 260, 367 *seq.*, 398
- Gonorrhœa (*see* Venereal diseases).
- Government Bureau of Home Economics .. 325
- Government Departments, doctors employed by 157 *seq.*
- Great Western Railway Medical Fund Society .. 151
- Gynæcological clinics .. 105

H PAGE

Hadow scheme 340
Halliday, Dr. 71, 352
Health education: 356 *seq.*, 408
  in the schools 357
Health of Munitions Workers' Committee 82
Health Organisation of the League of Nations 62, 320, 326, 332
Health services: administration of 28 *seq.*
  finance of 409
  and the Press 408, 413
Health visitors: 97, 98, 106, 107, 169, 171, 174, 178, 179, 357
  and cripples 300
Heart disease 377-78, 381, 383
Hearts of Oak Benefit Society 204, 208
Highlands and Islands Medical Service: 251, 260, 363 *seq.*, 398
  finance of 363, 367
Hill, Dr. Bradford 172
Holiday camps 126
Horder, Lord 49
Hospitals: (*see* general hospitals, mental hospitals, public hospitals, voluntary hospitals, *etc.*)
  accommodation in 256, 257, 258
  contributory schemes 176, 180, 213, 223, 227, 231 *seq.*, 252, 262, 265, 268, 410, 411
  contributory schemes and National Health Insurance 237
  contributory schemes, and Amalgamation with National Health Insurance 410
  contributory schemes—ophthalmic benefit 189
  contributory schemes and standard of life 237
  co-operation of, in the Highlands and Islands Area 365
  co-ordination of 264
  co-ordination with convalescent homes 269
  cottage 175, 262, 368
  cottage, in the Highlands and Islands Area 365
  and the general practitioner 265
  and local government areas 255, 261, 405
  in London, location of 261, 262
  nursing staff 169 *seq.*
Hospital Saturday Fund 267 268,
Hospital Saving Association 185, 234 *seq.*, 240, 252, 268
Hospitals Year Book 231, 246
Hours of Employment of Young Persons, Departmental Committee, on 68
Hours of work 67
Housing 33 *seq.*
  (*See also* overcrowding.)
Housing England 41
Housing and Public Health (*see* Sir John Robertson).

I

Ill-health, cost of 387 *seq.*
Immigration and the British population 314
Immunisation from infectious diseases 64
Imperial Military Nursing Service 171
Incorporated Association of Hospital Officers 242
Incorporated Dental Society 181, 182
Incorporated Society of Masseuses 192
Industrial accidents (*see* accidents *and* crippling)
Industrial assurance 228

PAGE

Industrial Assurance: An Historical and Critical Study by Sir Arnold Wilson, M.P. and Professor Levy 228
Industrial diseases 65, 78
Industrial health 65 *seq.*, 398, 410
Industrial Health Education Society 358
Industrial Health Research Board 69, 71, 80, 88, 310, 313, 353, 355
Industrial Medical Officers: 82 *seq.*
  Association of 86
  ethical rules 82, 83, 87
Industrial nursing 82, 85, 169, 172
Infant mortality: 91, 107
  changes in rate 370 *seq.*
  from congenital syphilis 292
  illegitimate infants 107
  and nutrition 320
  in slums 37 *seq.*
Infant welfare centres: 106, 107
  dental treatment 184
  paying welfare centres 107
  toddlers' clinics 106, 116
Infectious Diseases: 61 *seq.*, 156, 383
  Hospitals 63, 250, 254
  notification and control of 63
  of London school children 387
Inland Water Survey Committee 45
Insane, general paralysis of the (*see* venereal diseases) 289, 292
Inspectors of the Ministry of Health 29
Insurance Acts Committee 133, 144, 145, 149
Insurance against doctors' bills 154
Insurance committees 146 *seq.*, 200, 202, 206
Institute of Chemistry 190
Institute of Ophthalmic Opticians 187
Institutional treatment (*see* hospitals, etc.) 230 *seq.*
International Health Office 61
International Health Services 32
International Labour Office: 80
  Workers' Nutrition 320, 326
Invalid Children's Aid Association 123
Irish Free State Government and Health Insurance 209
Ivory Cross, The 185

J

James MacKenzie Institute for Clinical Research 311, 361
Joint Council of Qualified Opticians 187, 188
Joint Survey of Medical and Surgical Services in London 261
Jones, Sir Robert 299
Junior Instruction Centres: medical services 122
  and physical education 346

K

King Edward Hospitals' Fund for London 232, 234, 237, 245, 247, 248
King Edward VII Welsh National Memorial Association 287, 404
King George's Jubilee Trust 343

L

PAGE

- League of Nations 62, 320, 326, 332
- Licensing authorities (medical) 130, 132, 135
- Lidbetter, E. J. 318
- Ling, Thomas M. 352
- Lister Institute of Preventive Medicines 311
- Liverpool Hospitals Commission 240, 244, 248
- Llanelly and District Medical Service 151
- Local authorities: allocation of health services to 404
  - co-ordination of 403
  - and the Factories Act 80, 81
  - finance of 31
  - personnel of 403
  - powers in relation to health services 31
  - regionalism 404
- Local government: decentralisation of 402
  - and hospital areas 255, 256, 265, 405
  - internal organisation of the administrative system 405
  - on Tyneside, Royal Commission on 405
- Locke, J. 351
- London Child Guidance Council 353
- London County Council: Ambulances 265
  - and convalescent Homes 267
  - district medical services 155
  - and nutrition centres 328
- London Hospitals, Street Collection Central Committee 245
- London, Midland and Scottish Railway Hospital Fund 236
- London Public Medical Service 154, 227
- Longevity 369-370
- Lord Nuffield Fund for Cripples 301
- Lunacy (*see* mental disorder)
- Lunatic asylums, criminal 274, 275

M

- Machinery of Government Committee 81
- Macmillan, Margaret 114
- M'Gonigle, Dr. G. C. M. 319
  - *Poverty and Public Health* 39, 40, 320
- Male nurses (*see* nurses).
- Malnutrition (*see* nutrition).
  - evidence of 325
  - meaning of 320 *seq.*
  - relation to overcrowding 39
- Manchester Joint Hospitals' Advisory Board 260
- Masseurs 192
  - national expenditure on 388, 390
- Masseuses 192
- Maternal Morbidity 93
- Maternal Mortality 91 *seq.*, 378
  - and Morbidity, Departmental Committee on 93, 224
  - relation to malnutrition 99, 320, 322, 323
  - relation to number of previous confinements 95
  - report of an investigation into, 1937 93 *et seq.*
  - Report of Scottish Departmental on Puerperal Morbidity and Mortality 95, 97
  - in Wales, report on 99

PAGE

- Maternity and Child Welfare 90 *seq.*, 171, 304
  - authorities and consumption of milk 328, 334 *seq.*
  - Centres, Association of 108
  - clinics 116
  - and cripples 301
  - dental services 183
  - health education 356
  - National Council for 112
  - venereal diseases 291
  - welfare authorities 113
- Maternity homes 254
  - provided by local authorities 99
- Maternity Services (Scotland) Act 105, 179
- Maternity Services 110 *seq.*
- Maudsley Hospital 353, 354
- Meat, preparation of 51
- Medical Act 1858 129 *seq.*
- Medical Aid Societies 142, 150, 195
- Medical auxiliaries, registration of 193
- Medical benefit (*see* National Health Insurance).
- Medical Directory 141, 390
- Medical Education 135 *seq.*
  - and industrial medicine 86
  - methods of instruction 138
  - post-graduate education 139, 140, 355, 407
  - and psychological medicine 354
- Medical examination of employees 88
- Medical gymnasts 192, 300
- Medical inspectors of factories 34, 82
- Medical inspector of mines 82
- *Medical Officer* 133
- Medical Officers of Health 156 *seq.*
  - and public relations 359
  - qualifications of 156
  - Society of 52
- Medical partnerships and assistantships 143
- Medical practices, price of 143
- Medical practitioners monopolies of 131, 142
  - numbers 140, 141
  - powers and duties 141
  - recruitment 406
  - remuneration 144
- Medical Practitioners, Union of 135
- Medical research 135, 309 *seq.*, 393, 409
  - and Department of Health for Scotland 310, 313
  - and Ministry of Health 310, 313
  - and voluntary bodies (*see* voluntary hospitals) 311, 401
- Medical Research Council 28, 30, 139, 309 *seq.*, 398
  - and nutrition 319
- Medical schools 136, 231, 244, 401
- Medical Training 164, 406
  - length and cost of 136
- Medical Women's Federation 135
- Medicines: advertising 59, 412, 413
  - control of trade in—proposed legislation *re* 61
  - national expenditure on 388, 390
  - patent 57 *seq.*
  - Stamp Duties—Select Committee on 60, 391
  - taxation of 60
  - trade in 57
- Mental defect, incidence of 278, 279, 316

Mental deficiency .. 271, 276-281, 352
  costs .. 277
  education .. 276-277, 281
  guardianship .. 277, 278
  high incidence in slums .. 37
  licence system .. 278, 281
  research .. 281
Mental disorders .. 271-276, 351
  after-care work .. 274
  certification .. 272, 274
  costs .. 275
  out-patients .. 274, 275, 354
  private institutions .. 272
  private patients .. 272, 275, 276
  relation between statutory and voluntary authorities .. 275
  supervision .. 274
  voluntary patients .. 273 *seq.*
Mental hospitals .. 272-273, 275, 276
  accommodation .. 273
  observation wards .. 274
  paying patients .. 273, 275, 276
Mental nurses (*see* nurses, mental) .. 168
Mental patients: numbers .. 275, 276
  temporary .. 275, 276
Metropolitan Police ambulances .. 265
Metropolitan Water Board .. 45
Midwifery services: .. 100, 176, 178
  Scotland .. 178
Midwives: *see* Central Midwives' Board 91 *seq.*, 171, 174, 178
  Act 1936 .. 90, 101, 178
  supervising authorities .. 101, 113
Milk: .. 395
  Bars .. 331
  consumption .. 326
  consumption in schools .. 328, 330, 334, 335
  differential price experiments .. 329, 336
  in industries .. 70, 328
  in Schools scheme .. 124
  Marketing Board .. 329, 330
  P E P Report on .. 52
  subsidy .. 333, 336
  supply, protection of .. 52
  and tuberculosis .. 52
Miners' Welfare Fund: .. 70, 265
  and physical education .. 345
Ministry of National Service, Report of .. 319, 323
Ministry of Pensions Nursing Service .. 171
Moon Type .. 303, 305
Mortality: .. 369 *seq.*
  (*see* infant mortality, maternal mortality, tuberculosis, cancer, etc.)
  by geographical regions .. 382
  at successive ages .. 369

N

National Association of Boys' Clubs .. 343
National Association for the Prevention of Tuberculosis 288
National Baby Week Council .. 108
National Birthday Trust .. 99
National College of Teachers of the Deaf .. 307
National College of Physical Training: Proposal for 347, 348
National Council of Girls' Clubs .. 343, 349
National Council for Maternity and Child Welfare .. 108
National Council of Social Service .. 346
National Deposit Friendly Society .. 154
National Health Insurance: .. 194-229, 403
  additional treatment benefits .. 202-211, 233
  additional treatment benefits: extension of 222, 227
  administration .. 199
  administrative problems .. 225, 226
  approved societies 201 *seq.*, 207 *seq.*, 223, 226, 399
  Army, Navy and Air Force Fund .. 198, 200, 202
  capitation fee of medical practitioners .. 144, 216, 217, 218
  cases treated by insurance practitioners—sample analysis .. 383-385
  cash benefit .. 146, 202-205, 209
  convalescent homes .. 204, 206, 268
  cost of .. 199, 389
  dental benefit .. 183, 184, 185, 186, 222 *seq.*
  deposit contributors .. 198
  determination of doubtful questions of insurability .. 197
  dispensing .. 147, 189, 190, 191
  exempt persons, numbers .. 198
  exemptions .. 196
  extended insurance period .. 198
  extension of .. 211 *seq.*, 409, 411
  extent of .. 211
  Fifth Valuation .. 226
  finance of .. 199
  Fourth Valuation .. 201, 204, 207
  and industrial health .. 87
  insurance certificates .. 146 *seq.*, 397
  insurance rights .. 197
  Joint Committee for .. 199, 309
  (Juvenile Contributors and Young Persons) Bill .. 198, 199, 213, 215, 218
  maternity benefit
    91, 103, 104, 112, 114, 203, 205, 210, 224
  medical benefit 195 *seq.*, 200, 201, 214, 215, 216, *seq.*, 227
  nursing benefit .. 176, 180
  ophthalmic benefit .. 187, 188, 189, 224, 226
  panel practitioners' capitation fee .. 216, 217, 219
  persons covered by .. 196
  Royal Commission on 104, 112, 206, 208, 214, 222
  Royal Commission, Majority Report of .. 207, 209, 212, 220-226
  Royal Commission, Minority Report of .. 206, 209, 212, 225
  sanatorium benefit (tuberculosis) .. 285
  sickness benefit .. 66
  sickness benefit working weeks lost .. 387
  treatment of claims .. 210
  voluntary insurance .. 196, 215
National Institute for the Blind .. 305
National Institute for the Deaf .. 307, 308
National Institute of Industrial Psychology 86, 352, 355
National Library for the Blind .. 305
National Milk Publicity Council .. 328, 330-332
National Ophthalmic Treatment Board .. 186
National Pharmaceutical Union .. 191
National Playing Fields Association .. 344, 347
National Radium Trust .. 295 *seq.*
National Safety First Association .. 74, 86
National Society for Prevention of Cruelty to Children 123

PAGE

Navy nurses 171
Navy, Royal, Medical Services 158
Neo-natal mortality 375
Newman, Sir George 182
Newsholme, Sir Arthur 206
Nightingale, Florence 166
Nightingale Training School 166
Noise, prevention of 49
Norfolk hospitals 254, 261, 262
Notifiable diseases (*see* infectious diseases)
Nuffield, Lord 139, 140, 311
Nursery classes 117, 118
Nursery schools: 115, 117, 118, 357, 402
  dental treatment 184
  provision of meals in 117
  voluntary 114
Nurses: 166-180
  conditions of work in nursing homes 270
  general register 168
  hospital staff 169
  hours 174
  industrial 82, 85, 169, 172
  Queen's 174 *seq.*
  Ranyard 175, 176
  remuneration 170, 175
  State registration of 167
  training 169, 170, 173, 175
Nursing:
  adequacy of services 179
  cost of training 170
  Cottage Benefit Association 175, 176
  District (*see* district nursing)
  Lancet report on 167, 172, 173, 174
  private 172
  recruitment 172
  State services 171
  superannuation schemes 168, 170
Nursing homes: 269 *seq*
  mental patients 275
  registration 168, 169, 171
  Registration Act 270
  Select Committee on 269
Nursing profession:
  shortage of candidates for 167, 171
  State examinations 167, 173
Nursing services: 166-180
  organisation 167
Nutrition: (*See also* malnutrition) 319 *seq.*
  Advisory Committee on 30, 310, 319, 326, 332-334
  and advertising of vitamins 55
  and agriculture 327
  and dental decay 182, 320, 323
  and education 332, 334, 395
  and general health 395
  and the housewife 332
  and medical education 337
  and overcrowding 39
  and patent medicines 59
  and physical education 339
  and physical standards of the Army 323
  and physical standards of employed persons 324
  and physical standards of public school boys 324
  and physical standards of the unemployed 323
  and protection of the food supply 56
  and its relation to income 325, 326
  and rickets 299, 320, 322

PAGE

Nutrition:
  and school children 124
  and standard of life 322
  and tariff policies 327
  and travelling expenses 42
  and tuberculosis 287, 288, 289, 321
  and wages 332
  and wages and rent 327
  vital importance of 408

O

Occupational diseases 65, 78
Occupational therapy 77, 85, 169, 274
Oculists 186 *seq.*
Old age: 369 *seq.*
  Widows' and Orphan's Pensions 197, 219
Open air schools: 123
  and health education 357
Ophthalmic Benefit Joint Committee 188
Ophthalmic services: 186-189
  examinations 186
  National Ophthalmic Treatment Board 186, 187
  organisation of 186
Opticians: 186 *seq.*
  Association of Dispensing Opticians 188
  Diplomas 186
  Joint Council of Qualified Opticians 187, 188
  register of 186, 187
  relations with medical profession 186
Optimum Diet 321
Orr, Sir John 320, 325, 326, 332
Orthopædic Hospitals 243, 287, 299, 302
Orthopædic treatment 300
Osteopaths 193
Overcrowding: (*see also* housing) 34, 35, 36, 285, 395
  and infant mortality 37 *seq.*
  and maternal mortality 94
  and nutrition 39, 42
  and social conditions 42
  Survey in England and Wales, 1936, Report 34, 35
  and tuberculosis 285, 288, 289
Overprescribing (*see* National Health Insurance Dispensing).
Overtime 67, 68
Oxford and District Joint Hospitals Board 260

P

Panel Committee 148, 200
Panel doctors: conditions of work 162
  penalties for 149
  protection of rights of 148
Panel patients, numbers 144
Partly sighted children 304
Partners in Industry Inquiry 66, 89
Patent Medicines, Select Committee on 57
Pearse, Dr. Innes H. 360
Pharmaceutical chemists 190
Pharmaceutical Society 190, 191

Pharmacists, Register of 190
Pharmacy: 189-192
  Degrees in 190
  professional organisation 189
Pharmacy and Poisons Act 1933 58 *seq.*, 190
Philip, Sir Robert 282
Physical education: 125, 126, 338 *seq.*, 395
  cost of 346, 347
  in elementary schools 339, 349
  Government schemes 346, 347
  for juveniles 341, 342, 343
Physical Education: National Advisory Councils 346, 347, 359
  and nutrition 339
  organisers of 341
  in private preparatory schools 341
  in secondary schools 340
  training of teachers 347
  in universities 341
  and voluntary bodies 341 *seq.* 349, 350, 402
Physical training and medical supervision 349
Physical Training and Recreation Act, 1937 346 *seq.*, 392
Pioneer Health Centre, Peckham: 359 *seq.*
  medical surveys 360, 361
  social activities 361
Playing fields: 341
  need for 344
Poisons Board 58, 190
Poisons List 58, 190
Poole Joint Sanatorium Committee 286
Poor Law: Royal Commission on, Minority Report of 194
  Royal Commission on 363
  hospitals 250, 254
Population and the middle classes 314
Population, quality of 314
Port health authorities 31, 51, 52
Post graduate medical education (*see* medical education)
Post-natal care 104, 109, 110, 224
Potato Marketing Board 331
Pre-school child: 114 *seq.*
  and consumption of milk 335
Prison Nursing Service 171
Probationers (*see* nurses)
Proprietary foods 56 *seq.*, 326
Proprietary medicines 57, 391
Provisional Central Council 247
Prudential Approved Society 201, 207, 208
Psychological medicine 351
Psychology and education 355
Psychoneuroses: 352
  cure of 354
  incidence of 352
  instruction about 354
  and industrial health 71, 73, 87, 355
  research in 353
Public Analysts: 51
  Society of 54, 56
Public Assistance: dental services 183, 185
  medical services 154 *seq.* 223
Public health services, co-ordination of 402
Public hospitals: 249, 286
  administrative problems of 254
  "appropriation" 250
  control of Ministry of Health 251

Public hospitals:
  control of Department of Health for Scotland 251
  finance 251, 252
  government 250, 251
  medical staff 253
  ophthalmic treatment 189
  patients 253
  and the Poor Law 255
  specialists and consultants services in 241
"Public Medical Services" 153
Public Medical Service schemes for 212
Public relations of the Ministry of Health 359, 393
Puerperal mortality (*see* maternal mortality)

Q

Qualifications Recruitment Training and Promotion of Local Government Officers, Departmental Committee on 157
Queen Alexandra Royal Naval Nursing Service 171
Queen's Institute of District Nursing 101, 110, 112, 175 *seq.*
Queen's Nurses 174 *seq.*
  (*see* Queen's Institute of District Nursing).

R

Radium, cancer treatment 293 *seq.*
Radium Commission 30, 295 *seq.*
Rateable value: 403
  in the Highlands and Islands Area 365
Refuse removal 44
Regional Medical Officers 148, 202, 210
Rehabilitation of Persons Injured by Accidents, Inter-departmental Committee on 77, 259
Research and nutrition 332
Research, Department of Scientific and Industrial (*see* medical research) 47, 49
Rheumatism scheme, London County Council 387
River Pollution: 47
  Joint Advisory Committee on 47
Robertson, Sir John, *Housing and Public Health* 38
Rockefeller Foundation 312
Royal Air Force Medical Service 158
Royal Army Medical Corps 158
Royal Association in Aid of the Deaf and Dumb 307
Royal British Nurses' Association 101, 169
Royal College of Physicians of Edinburgh 128
Royal College of Physicians of London 127 *seq.*, 311
Royal College of Surgeons of England 128, 311, 312
Royal Commission on the Care and Control of the Feeble Minded (1904) 280
Royal Liver Approved Society 204, 208
Royal Medical Psychological Society 168, 169
Royal Sanitary Institute 171
Royal Surgical Aid Society 185

S PAGE
St. Andrew's Ambulance Association 266
St. Dunstan's Organisation 305
St. John Ambulance Brigade 266
Safety First Association, National 74, 86
Safety in Mines Research Board 80
Sanitation .. .. 42 *seq.*
Save the Children Fund, Nursery Schools Committee 118
Sewage Disposal 42, 391
School children, health (*see also* dependants of insured persons) .. .. 115, 119 *seq.*, 385
School dental officers and health education 357
School dental services 121, 123, 183
School meals 328
School medical officers and health education .. 357
School medical officers and measurement of nutrition 321, 324
School Medical Service: .. 119 *seq.*, 156, 385, 405
    Care Committees 122
    deaf children 306
    dental treatment .. 121, 123, 183
    gaps in 123
    medical inspection 120
    mental disorders 274
    ophthalmic treatment .. 189
    postural defects 123
    relation to other services .. 126
    staff 121
    treatment 120
    voluntary workers 122
School medical treatment 124
School nurses 171, 174
Scottish Medicine, History of 128
Scottish Pharmaceutical Federation 191
Sickness, incidence and nature of .. .. 382 *seq.*
Sight-saving clinics 304
Simey, T. S. 401
Slums (*see also* overcrowding) 34
Smoke Abatement Society 48
Social workers:
    cripples 300
    mental disorders 275
Society of Apothecaries 128, 129, 192, 193
Soft chancre (*see* venereal disease).
Special classes for mental defectives 277
Special hospitals: 230, 243, 249, 264
    amalgamation of 243
    and medical education 243
    and nurses 243
    Problems of Public Special Hospitals .. 254
    (*See also* infectious diseases hospitals.)
Special schools: 122
    for the blind 304
    for cripples 299, 300
    for the deaf and dumb 307
    for mental defectives .. 277, 279, 280
Specialists and consultants: .. .. .. 159 *seq.*
    of the Highlands and Islands Medical Service .. ..
    remuneration of 160, 239, 240
    remuneration of in public hospitals .. 241, 253
    training of 159, 240, 241
    work in hospitals .. 238, 240
Specialist and consultant service: and hospitals 237, 264
    and the general practitioner 397, 161 *seq.*

Spence, Dr., study of children in Newcastle-on-Tyne .. 39
Sterilisation: Departmental Committee on .. 315 *seq.*
    of mental defectives 281
Street cleansing 44
"Surgeon Apothecaries" 129
Syphilis, congenital 292
Syphilis (*see* venereal disease).

T

Trades Union Congress and British Medical Association, Joint Committee of 86, 151
Tuberculosis: .. .. .. 63, 156, 282-289, 377 *seq.*
    accommodation 286, 288
    cases .. .. 282 *seq.*
    and crippling 299
    expenditure 288
    hospitals 254
    incidence 282-285, 383
    Joint Council 312
    and milk 52
    mortality .. .. .. 282-285, 377 *seq*
    National Association for the Prevention of 38
    notification 282
    open-air schools 287
    and overcrowding 37, 38, 285
    and research 309, 312
    and social classes 285
    village settlements 287, 288
    visitors 287
    voluntary bodies 282, 286, 288
    workshops 287
    x-ray examinations 287

U

Ultra-violet radiation 192
Unemployment Insurance: 219, 226
    and nurses 168
University Grants Committee 139, 263, 401
Universities and study of medicine .. 127 *seq.*, 135, 137
Unmarried mothers 107
Unqualified practice .. .. 131 *seq.*
Use Your Health Services Campaign 358, 408, 412

V

Vaccination 64
Venereal diseases: 156, 289-293
    advertising of remedies 291
    after effects 292
    compulsory control 292, 293
    expenditure 291
    incidence 291
    propaganda 291

Voluntary bodies: defects and merits .. 247, 248, 249, 400
  development of 402
  incorporation of 32
  personnel of 400
  and physical education 341 *seq.*, 349, 350
  scope of 401
  supervision of 32
Voluntary Hospitals: .. .. 230 *seq.*, 412
  administrative services of .. 242
  Commission 232
  Commission, Report of 234-243, 261, 263, 269
  committees 245
  Committee for the County of London 245
  co-ordination of 245
  dental services 185
  finance 232
  government 231
  honorary staff .. .. 240 *seq.*
  incorporation 231
  medical staff 240
  ophthalmic treatment 189
  patients .. .. .. 237 *seq.*
  paying patients 239
  radium centres 296, 297
  and tuberculosis 287
  and venereal diseases 291
Voluntary and Public Hospitals:
  co-operation of 259
  geographical distribution of 261
Voluntary insurances against sickness: 204
  expenditure on 388-389
Voluntary, meaning of 231, 399
Voluntary and public service 398

W

Warehousemen and Clerks' Association Approved Society 204

Water Resources and Supplies, Joint Committee on .. 45
Water supply: 44, 391, 404
  regional advisory water committees .. 45
Welfare authorities (*see* maternity and child welfare).
Widows', Orphans' and Old Age Contributory Pensions 195
Williamson, Dr. G. Scott 360
Women's League of Health and Beauty .. 342, 344
"Wood" Committee 279, 280, 316
Workmen's Compensation: 65, 75, 76, 203, 301
  Departmental Committee on 77
  expenditure .. 388, 390
  and industrial medical officers 82, 85
  insurance 76
  mutual indemnity associations 76, 77
Works contract arrangements for insurance for Medical services 150
Workshops for the blind 305
Worshipful Company of Spectacle Makers .. 186, 187

X

X-Ray: cancer diagnosis and treatment .. 295 *seq.*
  treatment 192
  tuberculosis diagnosis 288

Y

Young Men's Christian Association 343
Young Women's Christian Association 343
Youth Hostels' Association 343, 344

REPORTS ISSUED BY PEP

The British Social Services. June 1937. 10 ins. × 8 ins., 210 pps. Price: cloth 10s. 6d., paper board covers 7s. 6d. (postage 6d. extra).

A survey of the existing public social services in Great Britain, with proposals for future development.

International Trade. May 1937. 10 ins. × 8 ins., 312 pps. Price: cloth 12s. 6d., paper covers 8s. 6d. (postage 6d. extra).

A survey of problems affecting the expansion of International Trade, with proposals for the development of British commercial policy and export mechanism.

The Supply of Electricity in Great Britain. December 1936. 10 ins. × 8 ins., 180 pps. Price: cloth 8s. 6d., paper covers 6s. (postage 6d. extra).

A survey of present-day problems of the industry, with proposals for reorganisation of electricity distribution.

The British Coal Industry. February 1936. 10 ins. × 8 ins., 224 pps. Price: cloth 10s. 6d., paper covers 7s. 6d. (postage 6d. extra).

A survey of the current problems of the British coal mining industry, and of the distribution of coal, with proposals for reorganisation.

The Entrance to Industry. May 1935. 10 ins. × 8 ins., 56 pps. Paper covers. Price 1s. (postage 3d. extra).

A survey of points of contact between education and industry in Great Britain, together with proposals for raising the school-leaving age and for part time continued education until eighteen.

The Exit from Industry. May 1935. 10 ins. × 8 ins., 52 pps. Paper covers. Price 1s. (postage 3d. extra).

A survey of the provision for old age and for retirement from gainful occupation in the United Kingdom, together with proposals for a national retirement pensions scheme.

A special edition of **The Entrance to Industry** and **The Exit from Industry**, bound together in cloth, for the bookshelf, is available at 4s. (postage 6d. extra).

Housing England. December 1934. Foolscap, 158 pps. Paper board covers. Price 5s. (postage 6d. extra).

Summarises housing legislation, analyses housing costs and finance and discusses the national organisation of working-class housing, standards and requirements, management, upkeep and repair, research and statistics, local rates and openings for cost reduction.

The Reports on the British Iron and Steel Industry, July 1933, and the British Cotton Industry, June 1934 (reprinted January 1935), are out of print.

Readers of the PEP fortnightly broadsheet PLANNING who have subscribed £1 or more in the current year, can obtain PEP Reports at a reduced rate, i.e., 2s. off those priced over 5s. and 1s. off those between 5s. and 2s.

Address for inquiries and orders:

THE SECRETARY, PEP, 16 QUEEN ANNE'S GATE, LONDON, S.W.1.

Telephone: WHItehall 7245 and 7246